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No. 99-___

In The

Supreme Court of the United States

THE UNIVERSITY OF COLORADO FOUNDATION, INC., THE UNIVERSITY OF COLORADO, THE REGENTS OF THE UNIVERSITY OF COLORADO, ROBERT H. ALLEN AND PAUL A. SELIGMAN,

Petitioners,

v.

AMERICAN CYANAMID COMPANY,

Respondent.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED FOR REVIEW

Whether a copyright owner proceeding under the restitutionary principle of 28 U.S.C. § 504(b) for the infringer's profits must bear the burden of proving any facts beyond infringement and gross revenues before the burden shifts to the infringer to prove deductible expenses and the elements of the infringer's profit attributable to factors other than the copyrighted work.

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PETITION FOR A WRIT OF CERTIORARI

The University of Colorado Foundation, Inc., The University of Colorado, The Regents of The University of Colorado, Robert H. Allen and Paul A. Seligman [hereinafter collectively "the University"] petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The court of appeals' opinion is reported at 196 F.3d 1366 (Fed. Cir. 1999), reprinted herein at Appendix, pages 1a-19a. The district court's opinions are reported at 974 F. Supp. 1339 (D. Colo. 1997) ["*Cyanamid III*"], reprinted herein at Appendix, pages 20a-71a; 902 F. Supp. 221 (D. Colo. 1995) ["*Cyanamid II*"], reprinted herein at Appendix, pages 72a-80a; and 880 F. Supp. 1387 (D. Colo. 1995) ["*Cyanamid I*"], reprinted herein at Appendix, pages 81a-127a.

JURISDICTION

The court of appeals' opinion affirming the district court's judgment awarding no relief on the respondent's copyright infringement claim, was issued on November 19, 1999. A timely petition for rehearing, filed by the respondent, was denied by the court of appeals on December 17, 1999. App. 129a. This Court has jurisdiction under 28 U.S.C. § 1254(1) (1994).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

U.S. Const. Article I, § 8(8): "The Congress shall have power: . . . To promote the progress of science and useful arts, by securing, for limited times, to authors and inventors, the exclusive right to their respective writings and discoveries."

17 U.S.C. § 504(b) (1994): "The copyright owner is entitled to recover the actual damages suffered by him or her as a result of the infringement, and any profits of the infringer that are attributable to the infringement and are not taken into account in computing the actual damages. In establishing the infringer's profits, the copyright owner is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work."

STATEMENT OF THE CASE

This case presents an important issue of copyright remedies, on which the Federal Circuit has diverged from the other circuits.

The University Doctors' Invention

In early 1979, Dr. Leon Ellenbogen, a chemist in American Cyanamid's marketing department, asked Dr. Robert Allen, one of the petitioners, to determine the accuracy of Cyanamid's competitor's claims that iron absorption from its prescription prenatal multivitamin

was superior to Cyanamid's prenatal multivitamin, Materna. After conducting a study commissioned by Cyanamid, Dr. Allen and Dr. Seligman ["the University doctors"] concluded that iron absorption provided by both prenatals was insufficient to meet the needs of pregnant women. Notwithstanding this finding, Cyanamid was not interested in conducting further studies.

On their own, the University doctors conducted further studies, II and IIA, to determine why iron was not being absorbed in the amounts supplied in the prenatal multivitamins. As a result of their studies, the University doctors determined that calcium carbonate and magnesium oxide, two ingredients in the prenatals, inhibited iron absorption. Based on their studies, the University doctors discovered a solution to the iron absorption problem – by reducing calcium carbonate and magnesium oxide to certain specified levels.

Based on Studies II and IIA, and after consultations with the University doctors, Cyanamid reformulated Materna to incorporate the University doctors' invention. As a result, reformulated Materna was the only prenatal multivitamin on the market that provided adequate iron absorption for pregnant women.

The Manuscript

Following their discovery of how to solve an industry-wide problem – the inadequate absorption of iron from prenatal multivitamins – the University doctors prepared an article summarizing the results of the studies. The University doctors in July 1981 submitted the manuscript to the *New England Journal of Medicine* and later to

the *Journal of Obstetrics and Gynecology*, where it was ultimately published.

Dr. Ellenbogen and Dr. Allen were long-time friends, and they often confidentially shared information with each other. Consistent with previous practice and his close relationship with Dr. Ellenbogen, Dr. Allen in July 1981 sent him a copy of the manuscript with the understanding it would be kept confidential. The district court found that Dr. Ellenbogen knew the contents of the manuscript were confidential and could not be reproduced without Dr. Allen's express authorization.

Unbeknownst to the University doctors, shortly after he received the manuscript, Dr. Ellenbogen began the process of obtaining a patent on the University doctors' invention. In December 1981, Dr. Ellenbogen submitted to the Patent and Trademark Office a patent application in which he claimed he was the sole inventor. In completing the patent application, Dr. Ellenbogen copied, traced and cut-and-pasted large sections of the manuscript, including Figures 1-4 and Table 1, onto the patent application. Moreover, he plagiarized significant portions of the manuscript in completing the patent application. At trial, Dr. Ellenbogen admitted that 40 percent of the patent application's text was copied from the manuscript. Dr. Ellenbogen did not disclose in the patent application that he had obtained any of the information in the application from the manuscript or from the University doctors.

Based on the patent application, submitted by Dr. Ellenbogen under oath, the Patent and Trademark Office in February 1984 issued Patent No. 4,431,634.

The University learned of the '634 patent in 1993. Shortly afterward, the University sued Cyanamid and Dr. Ellenbogen, asserting claims of copyright infringement, equitable patent ownership, fraud and unjust enrichment, among others. *See* App. 3a-4a.

Copyright Infringement and Remedies

In *Cyanamid I*, the district court found that Dr. Ellenbogen infringed the copyrighted manuscript. *See* App. 90a-98a. Cyanamid's liability for copyright infringement is a disputed – in its direct appeal from the district court's judgment against it on a number of the University's claims, Cyanamid did not appeal the court's judgment of copyright infringement liability.

The University sought under § 504(b) of the 1976 Copyright Act to obtain Cyanamid's profits from Dr. Ellenbogen's copyright infringement. Toward this end, the University presented evidence that, even after he was given the manuscript confidentially, Dr. Ellenbogen did not understand the invention and so was forced to trace, copy, plagiarize and cut-and-paste large parts of the manuscript into the patent application. The University also presented evidence showing that the figures and the table – which arranged in a unique, creative, informative and logical way, the data obtained from the studies – would have been important to the Patent and Trademark Office in evaluating the patent application, understanding the invention as described in the application, and deciding whether to issue a patent.

Finally, the University presented evidence of Cyanamid's gross revenue from reformulated Materna. During discovery, the University doctors requested that Cyanamid produce information concerning its gross profits for reformulated Materna. Cyanamid initially refused to respond to these discovery requests. It ultimately provided its "net sales" – $158,738,000 – on reformulated Materna for the period 1982-1995. Cyanamid defined "net sales" as "gross sales less returns, medical discounts, HMO rebates, freight and cash discounts." Despite the University's repeated requests in discovery, Cyanamid never produced information concerning its gross profits or gross revenues on reformulated Materna or information concerning foreign sales of reformulated Materna.

Judgment and Appeal

The district court entered summary judgment against Cyanamid on the University's copyright infringement claim, but awarded no damages or profits, stating:

> Plaintiffs' damages theory is problematic in the copyright context because it is the depiction of data, not the data itself, that is protected by the Act. Accordingly, Plaintiffs are entitled only to those damages and profits attributable to copying the Figures and Table into the patent application, not the reformulation depicted by them. Plaintiffs made no effort at trial to distinguish between damages attributable to the infringement and those attributable to the Patent itself.
>
> Given this failure, and the fact Plaintiffs did not elect to recover an award of statutory damages under 17 U.S.C. § 504(c), I decline to award

> them either damages or profits under the Copyright Act. In doing so, I note the Act's stated purpose of "prevent[ing] the infringer from unfairly benefiting from a wrongful act" should be realized in this case through the award of damages for Plaintiffs' common law claims of fraud and unjust enrichment.

App. 63a. The court entered judgment against Cyanamid on the fraud and unjust enrichment claims, awarding $44,396,159.

On November 19, 1999, the Federal Circuit affirmed in part, vacated in part, and remanded for further proceedings. The award of $44,396,159 was also vacated.

Affirming the district court's refusal to give any remedy for the copyright infringement, the Federal Circuit stated:

> The University argues that its proof of Cyanamid's gross revenues from sales of reformulated Materna shifted the burden of proof to Cyanamid under 17 U.S.C. § 504(b) (1994) to prove deductible expenses and to prove those elements of its profits that were attributable to factors other than copyright infringement. The University's argument presumes that the sales of reformulated Materna were due to Cyanamid's copyright infringement. The University had the burden to show this connection. *See* 4 Melville B. Nimmer and David Nimmer, *Nimmer on Copyright* § 14.03[A] (1999) (noting that plaintiff's claims for indirect profits rarely succeed). The district court found that the University did not meet this burden. This court detects no clear error in this finding. This court therefore affirms the district court's decision.

App. 17a-18a (footnote omitted).

After denying Cyanamid's petition for rehearing, the Federal Circuit on December 27, 1999, issued its mandate. App. 128a.

JURISDICTION OF THE LOWER COURTS

The District Court had jurisdiction over this case under 28 U.S.C. §§ 1331, 1332(a) & 1338(a) (1994). The Court of Appeals for the Federal Circuit had subject-matter and appellate jurisdiction under 28 U.S.C. § 1295(a)(1) (1994).

REASONS FOR GRANTING THE WRIT

The Federal Circuit has applied 17 U.S.C. § 504(b) in a way inconsistent with the other courts of appeals by imposing burdens of proof on copyright owners not contemplated by the Congress in enacting the statute.

The enforcement provisions of the 1976 Copyright Act are grounded on the policies of deterring infringement, ensuring that the infringer does not profit, and ensuring that the copyright owner suffers no loss. *See F.W. Woolworth Co. v. Contemporary Arts, Inc.*, 344 U.S. 228, 233 (1952); *see also* H.R. Rep. No. 94-1476, at 161 (1976) ("Damages are awarded to compensate the copyright owner for losses from the infringement, and profits are awarded to prevent the infringer from unfairly benefitting from a wrongful act."), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5777.

The Act accomplishes these policies by permitting the copyright owner to elect her remedy – either statutory

damages under 17 U.S.C. § 504(c) (1994), or actual damages plus the infringer's profit from the infringement under § 504(b).

Section 504(b) prescribes the procedure by which the copyright owner may obtain the infringer's profits:

> The copyright owner is entitled to recover the actual damages suffered by him or her as a result of the infringement, and any profits of the infringer that are attributable to the infringement and are not taken into account in computing the actual damages. In establishing the infringer's profits, the copyright owner is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work.

On its face, § 504(b) requires the copyright owner to produce evidence of the infringer's gross revenue; once she has done this, the burden shifts to the infringer to prove her deductible expenses and "the elements of profit attributable to factors other than the copyrighted work."

The question squarely presented in this case is whether such a facial reading of § 504(b) is the correct one, as most of the circuit courts of appeals hold, or whether § 504(b) should be construed to impose upon the copyright owner an initial burden of proving that an infringer's gross revenues are a sufficiently "direct" result of the infringement – and therefore "attributable" to the infringement – the construction favored by the Federal Circuit below.

As this Court noted in a patent case, "[t]he question as to who has the burden of proof in cases like this is one of great practical importance, and constantly arises." *Westinghouse Co. v. Wagner Co.*, 225 U.S. 604, 614 (1912), *cited in Sheldon v. Metro-Goldwyn Corp.*, 309 U.S. 390, 402 (1940).

The D.C., Second, Fourth, Sixth, Eighth and Ninth circuits place the burden of disproving attribution on the infringer: in these circuits, when a copyright owner has proven infringement, she need only prove the infringer's gross revenues to shift to the infringer the burden of proving that some or all of the gross revenues were not caused by – that is, not "attributable" to – the infringement. *See, e.g., Stenograph L.L.C. v. Bossard Assocs.*, 144 F.3d 96, 103 (D.C. Cir. 1998); *Johnson v. Jones*, 149 F.3d 494, 506 (6th Cir. 1998); *In Design v. K-Mart Apparel Corp.*, 13 F.3d 559, 563 (2d Cir. 1994); *Data General Corp. v. Grumman Systems Support Corp.*, 36 F.3d 1147, 1173, 1175 (1st Cir. 1994); *Saxon v. Blann*, 968 F.2d 676, 681 (8th Cir. 1992); *Konor Enters. v. Eagle Publications, Inc.*, 878 F.2d 138, 140-41 (4th Cir. 1989). As the First Circuit has explained, the infringer's burden under the apportionment provision of § 504(b) "is primarily to demonstrate the absence of a causal link between the infringement and all or part of the profits claimed by the plaintiff." *Data General*, 36 F.3d at 1175.

The Federal Circuit's view of § 504(b) is decidedly different. In affirming the district court's judgment that the University doctors were entitled to nothing under the Copyright Act, the Federal Circuit rejected the University doctors' argument that they had carried their burden by proving Cyanamid's gross revenues (net sales) from the sales of the reformulated Materna. The Federal Circuit

said: "The University's argument presumes that the sales of reformulated Materna were due to Cyanamid's copyright infringement. *The University had the burden to show this connection.* The district court found that the University did not meet this burden." *University of Colorado Foundation*, 196 F.3d at 1375 (emphasis supplied).

In striking out on its own, the Federal Circuit left behind no hint it was charting a new course contrary to the language and clear intent of § 504(b). Congress' decision to assign to the copyright owner only a "minimal burden," *Data General Corp.*, 36 F.3d at 1173, of producing evidence of the infringer's gross revenues before shifting to the infringer the burden of proving causation was deliberate and "sensible, since in most cases all information regarding profits is exclusively in the possession of the infringer," *Lottie Joplin Thomas Trust v. Crown Publishers, Inc.*, 592 F.2d 651, 657 (2d Cir. 1978); *see generally Westinghouse Co.*, 225 U.S. at 614-22.

There must be some logical limit on the profits recoverable from even the most blatant infringer, as the Federal Circuit suggests. *See* App. 17a-18a. Otherwise, as the Seventh Circuit noted, General Motors' theft and inclusion of copyrighted material in a sales brochure could result in the loss of its entire gross revenue. *Taylor v. Meirick*, 712 F.2d 1112, 1122 (7th Cir. 1983). Accordingly, the courts have recognized that, as the Federal Circuit noted in its reliance on *Nimmer on Copyright*,[1] " 'it is necessary to attribute profits directly to the infringement, which in turn requires that the damages be direct rather than

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[1] 196 F.3d at 1375 (citing 4 Melville B. Nimmer & David Nimmer, *Nimmer on Copyright* § 14.03[A] (1999)).

remote, and that an appropriate apportionment be made between revenue attributable to infringement and other revenue,' " *Walker v. Forbes, Inc.*, 28 F.3d 409, 412 (4th Cir. 1994) (quoting 3 *Nimmer & Nimmer, supra*, § 14.03 (1993)); *accord, e.g., Konor Enters.*, 878 F.2d at 141; *Frank Music Corp. v. Metro-Goldwyn-Mayer, Inc.*, 886 F.2d 1545, 1553 (9th Cir. 1989), *cert. denied*, 494 U.S. 1017 (1990).

But the Federal Circuit's breach of heretofore circuit unanimity is not one founded on the notion of proximate cause between an infringer's misconduct and the infringer's gross revenue. It is founded on a different question altogether: the proper allocation under § 504(b) to copyright owner and infringer of the relative burdens of proof and disproof.

The answer to this question must begin with the language of § 504(b) and conclude with the purposes to be achieved and the mischief to be avoided in the allocation of the burdens.

Section 504(b) has two sentences. The first sentence describes the two remedies available to the copyright owner – a legal remedy based on "actual damages," and an equitable remedy of restitution in the form of "any profits of the infringer that are attributable to the infringement." The second sentence is singular in its exclusivity – it addresses only the procedure by which the amount of restitution owed by the infringer is determined: "In establishing the infringer's profits, the copyright owner is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work." This procedure does not readily admit of any

construction that would support an approach which places any burden of proof upon the infringer beyond the "proof only of the infringer's gross revenue."

The Court's opinion in *Sheldon* helps explain the reasoning underlying the 1976 Act's adoption of a procedural regime that exempts the copyright owner from any causation burden and imposes that burden exclusively on the infringer. While acknowledging that the question of burden of proof "does not arise in the instant case," the Court – citing *Westinghouse* – suggested that the burden of proof in copyright infringement cases should be no different from the burden in patent infringement cases such as *Westinghouse*. In *Westinghouse*, the Court was faced with the question whether a patent owner or infringer would be required to carry the burden of proving the infringer's profits from infringement, particularly when this issue of causation was difficult or impossible for either side to prove. The answer, the Court held, lay in a court of appeals case:

> "In the present case the infringer's conduct has been such as to preclude the belief that it had derived no advantage from the use of the plaintiff's invention. . . . In these circumstances, upon whom is the burden of loss to fall? We think the law answers this question by declaring that it shall rest upon the wrongdoer, who has so confused his own with that of another that neither can be distinguished. . . . All the inconveniences of confusion is thrown upon the party who produces it, and it is for him to distinguish his own property or lose it."

225 U.S. at 621-22 (quoting *Brennan & Co. v. Dowagiac Mfg. Co.*, 162 Fed. 472, 476 (6th Cir. 1908)).

The Court has carried these principles into copyright law. *See Sheldon*, 309 U.S. at 406 ("Where there is a commingling of gains, [the infringer] must abide the consequences, unless he can make a separation of the profits so as to assure to the injured party all that justly belongs to him. When such an apportionment has been fairly made, the copyright proprietor receives all the profits which have been gained through the use of the infringing material, and that is all that the statute authorizes and equity sanctions."); *Harper & Row Publishers v. Nation Enters.*, 471 U.S. 539, 567 (1985) (same); *see also Data General*, 36 F.3d at 1176 ("the burden-shifting rule in *Sheldon* (and § 504(b)) is itself an equitable response to an infringer who has frustrated the task of apportionment by co-mingling profits").

Against this background, there seems little sense in returning the burden to the copyright owners in this case. The fact that a "substantial portion of the infringing work [that is, Cyanamid's patent application] was copied verbatim is evidence of the qualitative value of the copied material, both to the originator and to the plagiarist who seeks to profit from marketing someone else's copyrighted expression," *Harper & Row Publishers*, 471 U.S. at 565. Given Dr. Ellenbogen's inability to understand the invention, the lifting of the table, figures and text "lent [him] a special air of authenticity," *id.* at 568, to which he had no entitlement. Nor could the burden be returned to the University on the ground that any of the patent application was possibly based on Cyanamid's own creativity, since, as the Court has noted, " 'no plagiarist can excuse the wrong by showing how much of his work he did not pirate,' " *id.* at 565 (quoting *Sheldon v. Metro-*

Goldwyn Pictures Corp., 81 F.2d 49, 56 (2d Cir.) (Learned Hand, J.), *cert. denied*, 298 U.S. 669 (1936)); *see Konor Enters.*, 878 F.2d at 141 ("[T]he district court erroneously concluded that the copyright infringement was so minimal that Eagle could not have gained any measurable commercial benefit. Regardless of the magnitude of the infringement, it was nonetheless an infringement which shifted the burden of proof from Konor to Eagle under 17 U.S.C. § 504(b) once Konor presented evidence on Eagle's gross revenues.").

The courts have identified additional benefits (that is, profits), inuring to the infringer, that make it reasonable, and equitable, to require the infringer to carry the burden of proving causation. For example, the defendant who steals another person's copyrighted work and uses it as his own "will not incur the same expenses that he would if he were forced to start from scratch" and thus "[v]ery often[ ] the act of infringement allows the infringer to pocket as net profit a much larger percentage of his gross revenue than he could have absent the infringement." *Johnson v. Jones*, 149 F.3d 494, 506 (6th Cir. 1998); *see Deltak, Inc. v. Advanced Systems, Inc.*, 767 F.2d 357, 361 (7th Cir. 1985) ("Each of the copies [the infringer] distributed had a value of use to it equal to the acquisition cost saved by infringement instead of purchase, which [the infringer] was then free to put to other uses.").

The circuit schism caused by the Federal Circuit's opinion threatens to undermine the goals of the Constitution's copyright clause. Under the opinion, the "exclusive right" accorded to authors under article I, section 8, becomes an unsteady and unpredictable right. Its vindication, in the Federal Circuit's view, depends on the

copyright owner's ability to carry a "difficult or impossible," *Woolworth Co.*, 344 U.S. at 231, causation burden that neither § 504(b) nor the other courts of appeals assign to her and that was made difficult or impossible by the wrongdoer himself. Such a procedure leaves copyrights at the mercy of those who violate them.

CONCLUSION

The Federal Circuit's reallocation of § 504(b)'s burdens creates circuit confusion in an important area of copyright law. The issue merits plenary consideration on *certiorari*.

Respectfully submitted,

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APPENDIX

THE UNIVERSITY OF COLORADO FOUNDATION, INC., The University of Colorado, The Regents of the University of Colorado, Robert H. Allen, and Paul A. Seligman,
Plaintiffs-Cross Appellants,

v.

AMERICAN CYANAMID COMPANY,
Defendant-Appellant,

and

Leon Ellenbogen, Defendant.

Nos. 97-1468, 98-1113.

United States Court of Appeals,
Federal Circuit.

Nov. 19, 1999.

Rehearing Denied Dec. 17, 1999.

Michael E. Tigar, Haddon, Morgan & Foreman, P.C, of Denver, Colorado, argued for Plaintiffs-Cross-Appellants. With him on the brief were Harold A. Haddon, Saskia A. Jordan, and Ty C. Gee. Of counsel on the brief were Robert N. Miller, of Denver, Colorado; Frederick T. Winters, and Stephanie E. Dunn, LeBoeuf, Lamb, Green & MacRae, L.L.C., of Denver, Colorado Of counsel was Mark A. Lemley, Fish & Richardson, of Washington, DC.

Donald R. Dunner, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., of Washington, DC, argued for Defendant-Appellant. With him on the brief was Thomas H. Jenkins. Also on the brief were Daniel J. Thomasch, and Lauren J. Elliot, Orrick, Herrington & Sutcliffe, LLP, of New York, New York.

Before RICH,* RADER, and BRYSON, Circuit Judges.

RADER, Circuit Judge.

The United States District Court for the District of Colorado held American Cyanamid Co. (Cyanamid) liable for fraudulent nondisclosure and unjust enrichment. *University of Colorado Found., Inc. v. American Cyanamid Co.*, 974 F.Supp. 1339, 44 U.S.P.Q.2d 1231 (D.Colo.1997) (*Cyanamid III*). In addition to compensatory damages, the district court awarded Drs. Robert H. Allen and Paul A. Seligman (the Doctors) $1,000,000 in punitive damages.

The district court also declined to substitute the Doctors as the named inventors on U.S. Patent No. 4,431,634 (the '634 patent) and declined to name the University of Colorado Foundation, Inc., the University of Colorado, and the Regents of the University of Colorado (collectively, the University) as the equitable title holder of that patent. Finally, the district court refused to award damages to the University and the Doctors for infringement of Doctors' copyright in a journal article. Because the district court used an incorrect standard for determining inventorship of the '634 patent, this court vacates the liability judgments against Cyanamid and the other judgments, which rely on the inventorship determination.

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* Circuit Judge Rich heard oral argument in this case, but died on June 9, 1999. This case was decided by the remaining judges in accordance with Fed. Cir. Rule 47.11.

I.

Materna 1.60 (Materna) is a prenatal multivitamin/mineral supplement produced and sold by Lederle Laboratories, a division of Cyanamid. In 1981, Cyanamid began selling a reformulation of Materna. The reformulated product improved iron absorption over the previous version of the product. Cyanamid filed a patent application claiming the reformulation. The application named Dr. Leon Ellenbogen, a Cyanamid chemist, as the inventor. The '634 patent issued from this application in 1984.

Reformulated Materna contained, inter alia, 250 mg of calcium carbonate and 25 mg of magnesium oxide per dose. The '634 patent covered a broad range of formulations, as shown by claim 1:

> 1. A method of enhancing the absorption of iron in multimineral, iron-supplement preparations comprising the use of limited quantities of oxides and carbonates of calcium and magnesium administered in said preparations to not more than 300 mg and 75 mg respectively per unit dosage based upon the weight of elemental calcium and magnesium in said oxide and carbonate salts.

'634 patent, col. 5, ll. 42-50.

The Doctors first learned of the '634 patent in 1993. The University and the Doctors then brought suit in federal district court against Cyanamid and Dr. Ellenbogen. That lawsuit alleged (1) that the Doctors (who were medical researchers at the University of Colorado Health Sciences Center) invented the reformulation of

Materna covered by the '634 patent claims and communicated the invention to Dr. Ellenbogen, (2) that Dr. Ellenbogen intentionally omitted the Doctors as co-inventors in the patent application, and (3) that Cyanamid intentionally hid the patent from the Doctors. The University sought damages for fraudulent nondisclosure, patent infringement, and copyright infringement. The University and the Doctors sought restitution and disgorgement of Cyanamid's profits from sales of reformulated Materna. The University also sought equitable title to the '634 patent and sought to have the Doctors named as the inventors in the '634 patent under 35 U.S.C. § 256 (1994).

In response, Cyanamid asserted that Dr. Ellenbogen hired the Doctors to perform research that convinced Cyanamid to reformulate Materna. According to Cyanamid, the Doctors transmitted the results of their research to Cyanamid with the intention that Cyanamid would reformulate Materna and thereby profit. Cyanamid further asserted that Dr. Ellenbogen was the true inventor. Consequently, Cyanamid argued that it had no duty to notify the Doctors of the patent and denied any liability to the University. As affirmative defenses, Cyanamid asserted that the doctrines of preemption by federal patent law, laches, and limitations under relevant statutes barred the University's claims.

The parties filed cross-motions for summary judgment. The district court granted summary judgment to Cyanamid on the § 256 claim refusing to substitute the Doctors as the named inventors on the '634 patent. *University of Colorado Found., Inc. v. American Cyanamid*, 880 F.Supp. 1387, 1399, 35 U.S.P.Q.2d 1737, 1746 (D.Colo.1995) (*Cyanamid I*). The district court also granted summary

judgment to Cyanamid, denying the University's claims of patent infringement and ownership of equitable title to the '634 patent. *See University of Colorado Found., Inc. v. American Cyanamid Co.*, 902 F.Supp. 221, 222-23, 37 U.S.P.Q.2d 1406, 1407-08 (D.Colo.1995) (*Cyanamid II*). The district court also granted summary judgment to the University on copyright infringement. Specifically, the district court found that four bar graphs and a table in the Doctors' published article were copyrightable subject matter and copied by Cyanamid into the patent application. *See Cyanamid I* 880 F.Supp. at 1400-02.

Following a bench trial, the district court found that the Doctors invented the Materna reformulation and that Dr. Ellenbogen was not an inventor of that composition. To determine inventorship, the district court applied state common law, rather than federal patent law. Based on its inventorship finding, the court held Cyanamid liable to the University for both fraudulent nondisclosure and unjust enrichment. *See Cyanamid III*, 974 F.Supp. at 1339.

The district court assessed damages equivalent to a royalty on net sales of reformulated Materna "from the time of the fraud in 1981 through the life of the Patent." Thus, the district court arrived at total damages of $44,396,159. On the fraudulent nondisclosure claim, the court found Cyanamid liable for punitive damages of $500,000 to each of the Doctors. On the copyright claim, the court concluded that Cyanamid did not owe damages to the University. Finally, the court rejected all of Cyanamid's affirmative defenses. *See id.*

Cyanamid appeals the liability judgments on the fraudulent nondisclosure and unjust enrichment claims,

the associated monetary awards, and the court's rejection of its statute of limitation and laches defenses. The University appeals the court's denial of its correction of inventorship and equitable patent title claims as well as the denial of damages for copyright infringement.

II.

Summary judgment requires an absence of genuine issues of material fact and a showing that the moving party deserves judgment as a matter of law. *See* Fed.R.Civ.P. 56(c). This court reviews a grant of summary judgment de novo, with all justifiable factual inferences drawn in favor of the party opposing the motion. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). This court reviews a bench trial de novo for errors of law, and under the clearly erroneous standard for findings of fact. *See Gjerlov v. Schuyler Labs., Inc.*, 131 F.3d 1016, 1019, 44 U.S.P.Q.2d 1881, 1885 (Fed.Cir.1997).

A.

Two types of preemption are asserted in this case. First, this court must determine whether federal patent law preempts the University's claims under state law of fraudulent nondisclosure and unjust enrichment. Second, this court must determine whether federal patent law preempts the district court's use of a state common law standard of inventorship to find that the Doctors were the inventors of the Materna reformulation. This court applies its own law to determine whether federal patent law preempts state law. *See Midwest Indus., Inc. v. Karavan*

Trailers, Inc., 175 F.3d 1356, 1360, 50 U.S.P.Q.2d 1672, 1676 (Fed.Cir.1999) (en banc).

"Under the Supremacy Clause, it has been settled that state law that conflicts with federal law is without effect." *Hunter Douglas, Inc. v. Harmonic Design, Inc.*, 153 F.3d 1318, 1331, 47 U.S.P.Q.2d 1769, 1778 (Fed.Cir.1998) (quotations and citations omitted). Field preemption is found when state law regulates conduct in a field that Congress intends the federal government to occupy exclusively. Conflict preemption is found when the application of state law produces a conflict with the requirements, protections, prohibitions, or policies of federal law. *See id.* at 1332.

A Colorado fraudulent nondisclosure claim requires:

> (1) concealment of a material existing fact that in equity and good conscience should be disclosed; (2) knowledge on the part of the party against whom the claim is asserted that such a fact is being concealed; (3) ignorance of that fact on the part of the one from whom the fact is concealed; (4) the intention that the concealment be acted upon; and (5) action on the concealment resulting in damages.

Cyanamid III, 974 F.Supp. at 1353. A Colorado unjust enrichment claim requires:

> (1) at plaintiff's expense (2) defendant received a benefit (3) under circumstances that would make it unjust for defendant to retain the benefit without paying.

DCB Constr. Co. v. Central City Dev. Co., 965 P.2d 115, 119-20 (Colo.1998). The fraudulent nondisclosure and unjust enrichment causes of action cover a broad range of

conduct that does not bear on federal patent policies, and those causes of action are therefore not preempted by federal patent law. Nor are the state law causes of action preempted as applied in this case, because the two state law causes of action do not impose requirements that are inconsistent with federal law, nor do they "stand[ ] as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hunter Douglas*, 153 F.3d at 1332 (quotation and citation omitted).

The University alleged that Cyanamid acted in bad faith in the marketplace by withholding from the Doctors knowledge of the patent application for the Materna reformulation. Similarly, the University alleged that Dr. Ellenbogen and Cyanamid knew that the Doctors invented the Materna reformulation and intentionally omitted them from the application that matured into the '634 patent – a charge that Cyanamid perpetrated fraud on the Patent and Trademark Office (PTO) to obtain the patent.

Significantly, the Doctors made no attempt to patent the Materna reformulation, which they purport to have invented. Although the Doctors had no patent rights to reformulated Materna at the time of the suit, their state law claims are not simply an attempt to enforce property rights. Instead, the fraudulent nondisclosure claim springs from Cyanamid's alleged duty to inform the Doctors of the patent application. Similarly, the unjust enrichment claim springs not from an attempt to enforce intellectual property rights, but instead from Cyanamid's alleged wrongful use of the Doctors' research results. Therefore, as stated earlier, federal patent law does not preempt these state law claims.

Nonetheless, the University's fraudulent nondisclosure and unjust enrichment claims depend on the Doctors' status as inventors. As the district court correctly noted, "[w]hether Cyanamid had a duty to disclose its intention to and filing of the Patent application depends on who was the inventor of the reformulated version of Materna patented." *Cyanamid I*, 880 F.Supp. at 1395. In determining that the Doctors invented reformulated Materna, however, the district court applied state common law. *See Cyanamid III*, 974 F.Supp. at 1353 n. 2 ("Plaintiffs are not required to establish inventorship or ownership under the patent statute to state a common law claim for fraud or unjust enrichment. . . . [A] higher level of inventorship or ownership is required to state a claim for patent infringement."). Thus, this court must determine whether federal patent law preempts states from dictating standards for inventorship.

Field preemption describes exclusive regulation of a legal subject by federal law. *See English v. General Elec. Co.*, 496 U.S. 72, 78, 110 S.Ct. 2270, 110 L.Ed.2d 65 (1990). To preempt a field, federal law must evince "a scheme of federal regulation so pervasive" that no room remains for a state to supplement. *Id.* at 79, 110 S.Ct. 2270 Alternatively, federal law preempts a field by addressing a "federal interest . . . so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject." *Id.*

A primary purpose of patent law is to reward invention. *See Kewanee Oil. Co. v. Bicron Corp.*, 416 U.S. 470, 480, 94 S.Ct. 1879, 40 L.Ed.2d 315 (1974). The law of inventorship, which has heretofore developed solely under federal law, supports this purpose by identifying the actual

inventors of an invention eligible for patent protection. With its advent in Article 1 of the Constitution, patent law has developed under federal law to achieve the objective of national uniformity. *See Florida Prepaid Postsecondary Educ. Expense Bd. v. College Savings Bank*, 527 U.S. 627, 119 S.Ct. 2199, 144 L.Ed.2d 575, 51 U.S.P.Q.2d 1081, 1088 (1999) ("The need for uniformity in the construction of patent law is undoubtedly important.").

An independent inventorship standard under state law would likely have different requirements and give rise to different remedies than federal patent law. A different state inventorship standard might grant property rights to an individual who would not qualify as an inventor under federal patent law, or might grant greater relief to inventors than is afforded by federal patent law. Either situation might frustrate the dual federal objectives of rewarding inventors and supplying uniform national patent law standards.

The federal Patent Act leaves no room for states to supplement the national standard for inventorship. Title 35 contains explicit and detailed standards for inventorship. *See, e.g.*, 35 U.S.C. §§ 101-03, 116-20, 254-56, 261-62 (1994). Moreover, federal law has provided this court with jurisdiction to enforce these comprehensive provisions to provide a uniform national standard for inventorship. *See In re Snap-On Tools Corp.*, 720 F.2d 654, 655, 220 U.S.P.Q. 8, 9 (Fed.Cir.1983). Therefore, the field of federal patent law preempts any state law that purports to define rights based on inventorship. Consequently, this court vacates the district court's conclusion that the Doctors were the inventors of reformulated Materna and that Dr. Ellenbogen was not the inventor. Upon remand, the

court must apply federal patent law principles to determine whether the Doctors and/or Dr. Ellenbogen were inventors of the technology of the '634 patent.

B.

We set forth above the elements of a fraudulent nondisclosure claim in Colorado. The district court concluded that Cyanamid was liable to the University for fraudulent nondisclosure. The district court found that the Doctors were the inventors of the Materna reformulation. Thus, Cyanamid had an equitable duty to disclose the patent application to the true inventors, the Doctors. Further, the district court found that Cyanamid knew, and the Doctors were unaware, of the concealment of the patent filing. The district court found that Cyanamid concealed the application to induce the Doctors to continue to work with Dr. Ellenbogen. Because of this concealment, the district court found, the Doctors did not either seek recognition as inventors on the application or prevent the issuance of the patent with Dr. Ellenbogen named as the inventor. *See Cyanamid III*, 974 F.Supp. at 1353.

The district court's chain of reasoning hinges on the finding that the Doctors were inventors of the Materna reformulation. Because the district court used an incorrect standard to determine inventorship, this court vacates that finding. Therefore, without a correct finding of inventorship, this court must also vacate the district court's finding that Cyanamid had a duty to disclose the filing of the application to the Doctors. Finally, this court vacates the district court's conclusion that Cyanamid was

liable to the University for fraudulent nondisclosure for the same reason. These actions necessarily vacate as well the associated damages, punitive damages, and awards.

However, this court notes the following errors in the district court's damages determination. The district court found that Cyanamid's fraudulent nondisclosure "deprived [the University] of financial opportunities and prestige [it] would have enjoyed had their doctors been credited with the invention, and harmed Drs. Allen and Seligman both personally and professionally." *Id.* However, the record shows that the doctors intended to, and did, freely share their research results to allow Cyanamid to make and sell an improved Materna formulation. Neither the doctors nor the University sought to obtain a patent covering the Materna reformulation, and the University has never been in the business of manufacturing or marketing prenatal vitamins. Finally, Cyanamid did not attempt to enforce the '634 patent against the University. Therefore, even assuming that the Doctors were the sole inventors of the Materna reformulation (a fact to be determined upon remand), the only financial opportunity that the University could have lost was the payment for an assignment of ownership rights in the '634 patent or a license from the University to sell the reformulated product at the time the patent issued.

If the court finds that the Doctors jointly invented the reformulated product with Dr. Ellenbogen, the financial opportunity that the University could have lost was the payment that Cyanamid would have made to secure the Doctors' cooperation in filing the required documents with the PTO, such as oaths and declarations. Because

federal patent law allows joint owners to practice a patented technology without accounting to the other co-owners, Cyanamid would not have needed to acquire ownership of the patent or licenses thereunder. *See* 35 U.S.C. § 262 (1994). However, in that case, the University would have been within its rights to license others under the '634 patent or to produce and sell products thereunder. *See id.* Thus, the district court could find that Cyanamid would have also paid the University for either an assignment of the University's ownership interest in the '634 patent or an exclusive license thereunder. Either arrangement would have assured Cyanamid the exclusivity, which they enjoyed during the life of the '634 patent.

By declining to seek a patent in their own right, the Doctors and the University chose to forego the opportunity to gain prestige associated with the inventorship of such a patent. Instead they presumably were satisfied with the prestige associated with publication of a journal article detailing their research. Furthermore, the University submitted no evidence showing that the Doctors suffered any loss of prestige as a result of Dr. Ellenbogen being named as the inventor in the '634 patent. Therefore, the University did not prove that by naming Dr. Ellenbogen as the inventor in the '634 patent, Cyanamid deprived the Doctors or the University of any prestige.

Consequently, even if the Doctors were inventors of reformulated Materna under federal patent law, Cyanamid may be held liable pursuant to the fraudulent nondisclosure claim, but only for the payment that Cyanamid would have made to secure the Doctors' cooperation in filing the required documents with the PTO, an

assignment of ownership rights and/or an exclusive license from the University.

In setting the amount of damages (if any) on remand, the district court should consider the usual and customary arrangements at the time of the filing of the patent application. In particular the court should consider that university licensing barely existed as of the filing date of the '634 patent in 1981. In fact, the Bayh-Dole Act, which set the stage for modern university licensing went into effect less than six months before the '634 patent's filing date. *See* 35 U.S.C. § 200 (1994).

The district court also held Cyanamid liable to the University for unjust enrichment. Cyanamid does not argue that the district court erred in any findings under its unjust enrichment analysis. Therefore, this court does not review those findings. This court notes, however, that a defendant who uses a benefit provided by the plaintiff in an unauthorized and unfair manner may be liable in Colorado for unjust enrichment. *See, e.g., Cablevision of Breckenridge, Inc. v. Tannhauser Condominium Ass'n,* 649 P.2d 1093 (Colo.1982) (en banc) (holding defendant liable for unauthorized use of cable signal, i.e., installing equipment to provide cable service to unsubscribed condominium units). However, as noted before, federal patent law preempts the district court's common law inventorship standard. Like the fraudulent nondisclosure claim, unjust enrichment hinges on the finding that the Doctors invented reformulated Materna. Thus, this court vacates the unjust enrichment liability as well.

C.

The district court granted summary judgment in favor of Cyanamid on the University's request to have the Doctors substituted as the named inventors of the '634 patent under 35 U.S.C. § 256 (1994). The district court concluded that correction of inventorship under § 256 "is not applicable here where Plaintiffs seek correction based on Cyanamid's alleged fraud and deception." *Cyanamid I*, 880 F.Supp. at 1399. However, after the district court's decision in *Cyanamid I*, this court held:

> Section 256 allows deletion of a misjoined inventor whether that error occurred by deception or by innocent mistake. As well, the section allows addition of an unnamed actual inventor, but this error of nonjoinder cannot betray any deceptive intent by that inventor. In other words, the statute allows correction in all misjoinder cases featuring an error and in those nonjoinder cases where the unnamed inventor is free of deceptive intent.

Stark v. Advanced Magnetics, Inc., 119 F.3d 1551, 1555, 43 U.S.P.Q.2d 1321, 1324 (Fed.Cir.1997); *see also Pannu v. Iolab Corp.*, 155 F.3d 1344, 1350, 47 U.S.P.Q.2d 1657, 1662 (Fed.Cir.1998) ("[Section 256] is a savings provision. If a patentee demonstrates that inventorship can be corrected as provided for in section 256, a district court must order correction of the patent, thus saving it from being rendered invalid."). Thus, the district court's premise – that the actual inventors could not be substituted for a fraudulently-named inventor in a patent without thereby invalidating the patent – was incorrect. This court therefore vacates the district court's grant of summary judgment in favor of Cyanamid on the correction of

inventorship issue. Upon remand, the district court will have the opportunity to reconsider the University's section 256 claim.

D.

The district court granted summary judgment in favor of Cyanamid on the University's equitable title argument. The court reasoned that the patent would be invalid if the University was the equitable owner of the '634 patent. This conclusion sprang from the district court's belief that the fraudulent deletion from the patent document of the true inventors, i.e., the Doctors, would render the patent invalid. Because no party enjoys any equitable rights in an invalid patent, the district court denied this claim. *See Cyanamid II*, 902 F.Supp. at 222-23 (*citing Kennedy v. Hazelton*, 128 U.S. 667, 9 S.Ct. 202, 32 L.Ed. 576 (1888)).

To the contrary, substitution of the Doctors as named inventors in the '634 patent under 35 U.S.C. § 256, if warranted, would not invalidate the patent and would establish the University's equitable title to it. As noted above, correction of nonjoinder of entitled inventors does not invalidate a patent. Therefore, this court vacates the district court's summary judgment on the University's equitable title claim. Upon remand, the court will have the opportunity to consider the merits of this claim.

E.

The district court found that Cyanamid copied Figures 1-4 and Table 1 of the Doctors' journal article into the patent application. Because these depictions of data in

the Figures and Table were protectable expressions under the copyright statute, the district court determined that Cyanamid infringed the Doctors' copyright in the article. *See Cyanamid I*, 880 F.Supp. at 1401-02. However, the district court concluded that the University did not prove any damages from the copyright infringement. *See Cyanamid III*, 974 F.Supp. at 1356-57 ("Plaintiffs are entitled only to those damages and profits attributable to copying the Figures and Table into the patent application, not the reformulation depicted by them. Plaintiffs made no effort at trial to distinguish between damages attributable to the infringement and those attributable to the Patent itself.").

The University argues that its proof of Cyanamid's gross revenues from sales of reformulated Materna shifted the burden of proof to Cyanamid under 17 U.S.C. § 504(b) (1994) to prove deductible expenses and to prove those elements of its profits that were attributable to factors other than copyright infringement.[1] The University's argument presumes that the sales of reformulated Materna were due to Cyanamid's copyright infringement. The University had the burden to show this connection.

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[1] 17 U.S.C. § 504(b) (1994) reads as follows:

> The copyright owner is entitled to recover the actual damages suffered by him or her as a result of the infringement, and any profits of the infringer that are attributable to the infringement and are not taken into account in computing the actual damages. In establishing the infringer's profits, the copyright owner is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work.

See 4 Melville B. Nimmer and David Nimmer, *Nimmer on Copyright* § 14.03[A] (1999) (noting that plaintiff's claims for indirect profits rarely succeed). The district court found that the University did not meet this burden. This court detects no clear error in this finding. This court therefore affirms the district court's decision.

Cyanamid's Affirmative Defenses

Cyanamid appeals the district court's rejection of its statutes of limitations and laches defenses. For the reasons stated in the district court's opinion, Cyanamid's arguments fail.

CONCLUSION

This court vacates the district court's decision that the Doctors, and not Dr. Ellenbogen, invented the reformulation of Materna, and consequently vacates the court's fraudulent nondisclosure and unjust enrichment decisions. Because these liability decisions cannot stand, the damages awards are necessarily also vacated. This court also vacates the district court's summary judgment in favor of Cyanamid on the University's correction of inventorship and equitable patent title claims. Finally, this court affirms the district court's copyright damages and affirmative defense decisions.

COSTS

Each party shall bear its own costs.

AFFIRMED IN PART, VACATED IN PART, AND REMANDED

UNIVERSITY OF COLORADO FOUNDATION, INC., a Colorado not-for-profit corporation, the University of Colorado, an institution of the State of Colorado, The Board of Regents of the University of Colorado, a body corporate of the State of Colorado, Robert H. Allen, an individual, and Paul A. Seligman, an individual, Plaintiffs,

v.

AMERICAN CYANAMID COMPANY, a Maine corporation, Defendant.

Civil Action No. 93-K-1657.

United States District Court, D. Colorado.

July 7, 1997.

As Corrected July 8, 1997.

Harold A. Haddon, Haddon, Morgan & Foreman, P.C., Robert N. Miller, LeBoeuf, Lamb, Greene & MacRae, L.L.P., Denver, CO, for plaintiffs.

Daniel E. Thomasch, Richard J. DeMarco, Jr., Donovan, Leisure, Newton & Irvine, New York City, Roger P. Thomasch, Ballard, Spahr, Andrews & Ingersoll, Denver, CO, for defendant.

MEMORANDUM DECISION

KANE, Senior District Judge.

This action began in August 1993. Previously published opinions on the parties' cross-motions for summary judgment and on American Cyanamid's motion for reconsideration can be found at 880 F.Supp. 1387, 1995

Copr. L. Dec. ¶ 27,447, 99 Ed. Law Rep. 821, 35 U.S.P.Q.2d 1737 (D.Colo.1995) and 902 F.Supp. 221, 105 Ed. Law Rep. 435, 37 U.S.P.Q.2d 1406 (D.Colo.1995).

Trial to the court was held beginning May 2, 1996, and concluded May 24, 1996. On September 18, 1996 the parties filed corrections to their proposed findings of fact and conclusions of law submitted before trial. I have reviewed those proposed findings and conclusions as well as the transcript of proceedings, the exhibits admitted at trial, the parties' briefs and the record of the proceedings. What follows are my findings of fact and conclusions of law, as required by Rule 52 of the Federal Rules of Civil Procedure.

I. JURISDICTION.

Jurisdiction is uncontested. It is based in part on 28 U.S.C. §§ 1331 and 1338(a) because Plaintiffs sought relief under the Patent Act, 35 U.S.C. § 256 and the Copyright Act, 17 U.S.C. §§ 101-810, and also on 28 U.S.C. § 1332 because there are common law claims, the case is between citizens of different states and the matter in controversy exceeds the statutory threshold, exclusive of interest and costs.

II. THE PARTIES.

Plaintiffs are the University of Colorado, an institution of the State of Colorado created by the Constitution of Colorado (the University) and governed by the Board of Regents, also created by the Constitution of Colorado (the Regents); The University of Colorado Foundation,

Inc., a Colorado not-for-profit corporation with its principal place of business in Boulder, Colorado (the Foundation); Robert H. Allen, M.D., a professor of medicine, professor of biochemistry and Director of Hematology at the University of Colorado Health Sciences Center (Dr. Allen); and Paul A. Seligman, M.D., a hematologist and professor of medicine at the University of Colorado Health Sciences Center (Dr. Seligman).

Defendant American Cyanamid Company (Cyanamid) is a Maine Corporation qualified to do business in the State of Colorado.

III. SUMMARY.

Plaintiffs allege that Drs. Allen and Seligman performed a number of studies related to the prenatal multivitamin supplement called Materna, which was manufactured and sold by Cyanamid, and that in the course of those studies, Drs. Allen and Seligman invented a reformulation of Materna and informed Cyanamid of the reformulation. Thereafter, the doctors prepared an article describing their studies and their reformulation invention and furnished Cyanamid a confidential copy of the pre-publication draft of the article. Plaintiffs charge Cyanamid wrongfully copied the article into a patent application and filed the application in its own name without informing Plaintiffs, without naming the doctors as the inventors and naming instead Cyanamid's employee, Leon Ellenbogen, Ph.D. (Dr. Ellenbogen), as the sole inventor. A patent was issued to Cyanamid on February 14, 1984 (the "Patent") and Cyanamid sold the

reformulated Materna under that Patent thereafter. Plaintiffs claim Cyanamid exercised its patent rights to prevent others from manufacturing or selling the reformulation and concealed the existence of the Patent from Plaintiffs until they discovered it in or about June 1993.

The Second Amended Complaint set forth eight claims for relief: conversion, fraud, wrongful naming of inventor in violation of 35 U.S.C. § 115, copyright infringement, misappropriation of Plaintiffs' business value, patent infringement, breach of confidentiality obligations and unjust enrichment.

In my decision on the parties' cross-motions for summary judgment issued April 3, 1995, I found Cyanamid was entitled to judgment on the claims for conversion, wrongful naming of inventor, misappropriation and breach of confidentiality obligation, *University of Colorado v. Cyanamid* (*Cyanamid I*), 880 F.Supp. 1387, 1403-04 (D.Colo.1995), but I declined to rule on Cyanamid's assertion that Plaintiffs' remaining claims were time-barred because the statute of limitations defense hinged on disputed questions of fact. *Id.* at 1406. I granted judgment in favor of Plaintiffs on the claim for copyright infringement, *id.* at 1400-02, and ruled that the remaining three claims would go to trial.

Cyanamid moved for reconsideration of the patent infringement ruling, arguing none of the Plaintiffs could establish themselves as equitable title holders of the Patent entitled to relief. I granted the motion and, upon reconsideration, granted summary judgment in favor of Cyanamid on the patent infringement claim. *University of*

Colorado v. Cyanamid (*Cyanamid II*), 902 F.Supp. 221, 222-23 (D.Colo.1995).

Thus, two claims remained for trial: the claim for fraud based on failure to disclose the Patent and the claim for unjust enrichment. The question of what damages, if any, were to be awarded Plaintiffs on their copyright infringement claim, was also reserved for trial.

At trial, Cyanamid denied any basis for damages and denied liability on the claims for fraud and unjust enrichment. It argued that neither the University, the Regents nor the Foundation had standing to bring claims because Drs. Allen and Seligman failed to comply with the University Patent Policy and because the doctors' manuscript did not constitute a work for hire. Cyanamid maintained the fraud claim was time-barred under applicable statutes of limitations, and argued the claim for equitable relief was barred by the doctrines of laches, unclean hands and estoppel.

As to the merits of Plaintiffs' claims, Cyanamid argued that its employees were the true inventors of the reformulation; that it is the lawful owner of the Patent, and that the proper inventor was named on the Patent; and denied that any Cyanamid employee made misrepresentations regarding the Patent or its existence or concealed the existence of the Patent from the Plaintiffs. Cyanamid further argued that Plaintiffs failed to apply for a patent within the time limits set by 35 U.S.C. § 102(b) and that Plaintiffs' failure in this regard was not caused, induced or contributed to in any way by Cyanamid.

Other issues are implicit and will be discussed as they arise.

IV. DISCUSSION.

A. Facts.

Much of the evidence was sharply contested. Some, of course, was not. From the totality of evidence, I make the following findings of fact:

1. Background.

Dr. Robert Allen is an internationally recognized hematologist and Director of the Division of Hematology at the Health Sciences Center. He is fifty-nine years old and a graduate of Amherst College with a B.A. in philosophy. He engaged in his pre-medical school studies at the University of California at Berkeley and received his M.D. degree in 1966 from the Washington University School of Medicine in St. Louis, Missouri. After serving an internship, a residency and a fellowship in hematology/oncology he became an assistant and then Associate Professor of Medicine at Washington University. In 1977 he joined the faculty at the Health Sciences Center as a Professor of Medicine and Director of the Division of Hematology, and in 1980 he became a professor of biochemistry as well. He has numerous academic honors, professional awards, memberships and board certifications. His bibliography exceeds one hundred published papers, abstracts and articles and he is the inventor or co-

inventor of eleven issued patents. Dr. Allen's major scientific interest is cobalamin metabolism and the cellular uptake of macromolecules.

Paul A. Seligman is a fifty-one year old physician and Professor of Medicine at the Health Sciences Center. He received his Bachelor of Science degree from Michigan State University in 1968 and his M.D. degree in 1972 from the State University of New York at Buffalo School of Medicine. Following a residency in internal medicine in 1975, he became a Fellow in Hematology-Oncology at Washington University School of Medicine, St. Louis, Missouri. He completed that fellowship after moving to the University of Colorado School of Medicine where he began as an assistant professor in 1978. He has received numerous honors and elections to prestigious scientific organizations, is a founding member of the American Academy of Hospice Physicians and serves on various faculty committees at the University. He is course director in medicine for junior medical students, director of elective courses for senior medical students and course director for sophomore medical students in hematology and pathophysiology of disease. He is also the Director/Preceptor in Hospice Medicine for senior medical students and has authored or co-authored more than 25 original articles and eight book chapters. Dr. Seligman's major scientific interest is in cell surface receptors and the cellular uptake of iron.

Approximately 20% of a Department of Medicine faculty member's salary is paid by the State of Colorado. The professors are expected to generate the remainder through research grants. Most of these grants come from the National Institutes of Health with the expectation that

some clinical application of the research will be achieved or eventually developed, and some funds are received from private bequests. In addition, researchers are asked on occasion to conduct tests or research for private organizations. The latter occurred in this case.

Dr. Ellenbogen was the Chief of Nutritional Science at Cyanamid's Lederle Laboratories Division. His duties included clinical and technical management of all nutritionals, hematinics and vitamins. He is a chemist who received a B.S. degree from the City College of New York, 1949, an M.S. from New York University in 1951, and his Ph.D. from Indiana University in 1954. Dr. Ellenbogen has served since 1978 as an Adjunct Professor of Nutrition at the Cornell University Medical College, and is named as the inventor on the Patent, as well as on ten other patents.

2. The Friendship.

While he was a research fellow, Dr. Allen first learned of Dr. Ellenbogen and his work through an article in the Journal of Biological Chemistry and contacted Dr. Ellenbogen by telephone to purchase a starting material (hog stomach powder) for his work in progress. Shortly thereafter, in 1972, the two met at an American Hematology Society gathering and a professional relationship developed based on their mutual interest in vitamin B12 research. Dr. Ellenbogen had changed the focus of his research, but wished to be kept apprised in the field in which Dr. Allen continued to be directly engaged. Because the two shared a common interest but were not competing, the relationship was mutually beneficial.

Dr. Ellenbogen wanted to keep current in the B12 field because he reviewed articles on the subject and requested Dr. Allen to provide him with prepublication copies of manuscripts Dr. Allen wrote. Dr. Ellenbogen agreed to treat these manuscripts in a confidential manner and not disseminate them without Dr. Allen's consent. From that time on, the two engaged in telephone conversations, correspondence and personal visits at professional meetings.

The nature of their relationship was an intellectual exchange stimulated by Dr. Allen sending manuscripts and other academic products such as lecture slides to Dr. Ellenbogen, who in turn supplied Dr. Allen with the material (hog stomach powder) required for his research. This alliance was strengthened in 1975 when Dr. Ellenbogen wrote Dr. Allen asking him to meet Dr. Ellenbogen's son who was applying to medical schools and, if Dr. Allen thought it appropriate, to write a letter of recommendation to the Washington University School of Medicine's admissions committee. Dr. Allen agreed, found the young man to be an outstanding candidate, and was pleased to serve as a reference for him.

From 1972 to 1977 the relationship between the two scientists developed to the point that Dr. Ellenbogen would describe certain problems existing at Lederle to Dr. Allen with complete confidence that he would keep them confidential and Dr. Allen would describe his latest research techniques and activities without worrying that Dr. Ellenbogen would appropriate them for his own use.

In 1977 Dr. Ellenbogen received a new title at Lederle relating to professional services. In this capacity, he

became a scientific advisor who provided technical assistance to the company's marketing efforts with respect to vitamins and other nutritional products. In January 1978 Dr. Ellenbogen contacted Dr. Allen with reference to a vitamin B12 absorption problem experienced by patients with pernicious anemia. Dr. Allen agreed to undertake *in vitro* assays of samples of intrinsic factor, a purified substance derived from hog stomach powder, to correlate the test results with *in vivo* tests by a Florida physician of a patient suffering from pernicious anemia. The desired result was to replace *in vivo* testing with Dr. Allen's laboratory methods. i.e., *in vitro* testing. Dr. Allen conducted the assays and sent the results to Dr. Ellenbogen. Although no fee had been established for these tests before they were undertaken, Lederle sent Dr. Allen a $500 honorarium that he deposited in a research account at the University.

The intellectual exchange continued as Dr. Allen sent Dr. Ellenbogen copies of prepublication manuscripts and Dr. Ellenbogen sent prepublication copies of his reviews to Dr. Allen. The reviews received by Dr. Allen always dealt with intrinsic factor and transcobalamins, the proteins that bind vitamin B12 to different tissues in the body. Dr. Ellenbogen continued to send intrinsic factor samples to Dr. Allen who performed assays on them and Lederle paid accordingly. Through the University, Dr. Allen instituted a patent application for his invention of the assay procedure. He and Dr. Ellenbogen discussed the University's patent procedures and Dr. Allen provided Dr. Ellenbogen with copies of the data he had filed with the University in connection with the application.

3. The Problem.

In early 1979 Dr. Ellenbogen called Dr. Allen as part of their continuing dialogue on intrinsic factor, *in vitro* analysis and review articles. During the conversation, Dr. Ellenbogen mentioned for the first time that Lederle had a very important prenatal vitamin compound called Materna. Dr. Allen had no familiarity with the product though he was aware of the medical significance of prenatal vitamins.

Dr. Ellenbogen advised Dr. Allen that Stuart Pharmaceuticals was Lederle's major competitor in the prenatal vitamin market through its product, "Stuartnatal," with each company commanding 40 to 45% of the market. He told Dr. Allen that the salespeople for Stuart Pharmaceuticals when making detail calls on physicians had been advising them that Materna was an inferior product because the iron in Materna could not be absorbed by the patient as well as iron in Stuartnatal.

This was so, it was said, because the calcium in Materna was calcium carbonate whereas Stuartnatal contained calcium sulfate. When Materna was absorbed in the stomach, it was alleged, the carbonate would dissociate from the calcium and the fumarate (a negative ion with the iron) would dissociate resulting in a complex that would precipitate, removing the iron from the solution so that it could not be absorbed.

Dr. Ellenbogen discounted the claim as theoretical, but he was trying to find a way to test and compare iron absorption from Materna and Stuartnatal to deflate

Stuart's sales pitch. Dr. Allen advised that the gold standard was to incorporate a radioactive isotope of iron into a product administered to a test subject and then measure the radioactive count either in the body to determine the amount absorbed, or in the feces to determine the amount that had not been absorbed which was then subtracted from the amount administered to account for the amount absorbed. This technique, however, was not satisfactory for a number of reasons not the least of which was the risk inherent in exposing humans to radioactive isotopes.

Dr. Allen informed Dr. Ellenbogen of a 1976 article in the *Scandinavian Journal of Hematology* titled "Iron Absorption Studies" by Dr. Gunnar Ekenved which described a very high correlation between serum iron increase following ingestion and the amount of radioactive iron absorbed using the gold standard technique. Dr. Allen advised Dr. Ellenbogen that the serum iron technique to quantify iron absorption based on the Ekenved studies could be used to determine the accuracy of Stuart Pharmaceutical's claim.

Dr. Allen had learned of the Ekenved studies shortly after their publication when he was reading extensively in the field of iron absorption and hemochromatosis. At trial, Dr. Ellenbogen testified that he, too, knew of the Ekenved studies before Dr. Allen mentioned them in the early 1979 telephone conversation, but I find his testimony in this regard, as well as others, not credible.

4. The Studies.

Within a fortnight of their first telephone conversation regarding Materna, Dr. Allen and Dr. Ellenbogen spoke again. The two scientists agreed the iron absorption studies method could be used to test the relative absorption qualities of Materna and Stuartnatal without having to use radioactive iron. They discussed in detail how the study could be done and Dr. Ellenbogen said he had $5,000 in his budget to pay for the study. Although Dr. Allen said additional testing could be done to determine total iron binding capacity, Dr. Ellenbogen advised he was interested only in determining whether Materna provided the same iron absorption as Stuartnatal. He thought both products delivered adequate amounts of iron for prenatal subjects and didn't think there would be any significant difference between the two products. Accordingly, he wasn't interested in determining the milligrams of iron absorbed. Because the tests were limited to a comparison of the two products, Dr. Allen's recommendations to test for iron alone and to use a placebo were dropped. It was agreed that 16 normal females of child-bearing age would be the subjects of the study.

When they agreed on how a study would be done, Dr. Allen had not thought he would be the person conducting the study and when asked by Dr. Ellenbogen, he told him he would be unavailable due to other commitments. Dr. Ellenbogen then said he actually had a total of $10,000 in his budget for the study and that it was customary in the pharmaceutical industry to determine what the clinical studies would cost and then double that figure with the second half going to the investigator as an

additional incentive. Dr. Ellenbogen said he trusted Dr. Allen's work and urged him to perform the study. These factors, coupled with the fact that the tests were of scientific interest because they had never been done on prenatal vitamins, persuaded Dr. Allen to do the study.

Dr. Allen told Dr. Ellenbogen about Dr. Seligman, his colleague on the faculty whose special area of interest was iron, and said he would ask Dr. Seligman to assist. Dr. Ellenbogen agreed to draw up the protocol and Drs. Allen and Seligman to conduct the study.

When Dr. Ellenbogen called Dr. Allen and read his proposed protocol to him, Dr. Allen found the proposal unacceptable and dictated to Dr. Ellenbogen background information on the carbonate theory and how calcium carbonate might interfere with iron absorption, the details of how the subjects would be selected, the number and manner of obtaining the blood samples and how the iron would be assayed. Dr. Allen felt awkward dictating these changes and believed this conversation created a strain on his otherwise friendly relationship with Dr. Ellenbogen. In due course Dr. Ellenbogen mailed the revised protocol to Dr. Allen for written comment, however, and Dr. Allen replied that it was excellent.

Following University rules, Dr. Allen obtained clearance to conduct the tests from the Human Studies Committee. In July 1979 Dr. Ellenbogen sent a check for $5,000 made payable to Dr. Allen who did not cash it, but requested and received a new check which was payable in like amount to the Division of Hematology and deposited in its general account. This was the first half of the

$10,000 to be paid for the contemplated single study. (Study I).

Dr. Ellenbogen made a pre-test visit to Denver to inspect the facilities and meet the personnel who would be involved in the study. "Sponsors," he stated, "must *always* do that to satisfy what is called good clinical practices that the FDA requires." (Emphasis added). Dr. Allen and his wife hosted a dinner party for Dr. Ellenbogen at their home after which Dr. Ellenbogen wrote a gracious appreciation letter for the hospitality extended to him and the two scientists continued their professional friendship discussing, among other topics, the iron absorption studies, intrinsic factor and vitamin B12 analogues.

Contrary to the expectations of Drs. Allen and Seligman that iron absorption from Materna would be worse than that obtained from Stuartnatal and Dr. Ellenbogen's expectation that absorption from both would be about the same and acceptable in either, the Study I results showed poor absorption from both products. While this result satisfied Lederle's marketing concerns because it deflated Stuart's sales pitch that Materna was inferior to Stuartnatal, it caused Drs. Allen and Seligman grave concern that pregnant women who used either product would not obtain the necessary iron for which the medication was prescribed. Therefore, they immediately recommended to Dr. Ellenbogen that a follow-up study be conducted to measure the absorption from a simple iron compound (ferrous fumarate), to establish a baseline for comparison against the Study I results.

Dr. Allen followed the Human Studies Committee's approval process and prepared another Subject Consent Form for the new study (hereafter, Study IA) Neither Dr. Ellenbogen nor anyone else at Cyanamid participated in preparing a protocol for Study IA, nor did Cyanamid send a check in payment as it did before Study I commenced. Dr. Ellenbogen did not make a visit before the study began. Drs. Allen and Seligman completed Study IA in September 1979 and Dr. Allen sent the results of Study IA to Dr. Ellenbogen. I find Study IA was undertaken and completed by Plaintiffs entirely independently of Cyanamid.

Study IA showed satisfactory absorption from the iron compound alone, validating Study I's conclusion that there was poor iron absorption from both Materna and Stuartnatal. After receiving the results of Study IA Dr. Ellenbogen initiated steps to obtain a grant of $5,000 which was awarded to Plaintiffs. At the conclusion of Study IA, although Cyanamid had noticed that Materna did not yield good iron absorption, it did not know the reasons therefor and Cyanamid did not inform physicians or the public about the results of either Studies I and IA. Moreover, Cyanamid, at that time, had no plan, theory or formula to reformulate Materna to achieve improved iron absorption so as to approximate the amount of iron contained in its product.

In a letter to Dr. Allen dated October 5, 1979, Dr. Ellenbogen wrote, "I hope your studies are progressing well and we get some good clear results on the cause of reduced iron absorption." Dr. Ellenbogen did not recall whether he had any plan to do further studies on iron absorption after receiving the results of Study IA and did

not believe that magnesium oxide and calcium carbonate would inhibit iron absorption.

Entirely independent of Cyanamid, Drs. Allen and Seligman devised a study to determine the reasons for the poor iron absorption of both Materna and Stuartnatal (hereafter Study II). Stuart's theory that calcium carbonate interfered with iron absorption because carbonate combined with the iron to form ferrous carbonate could explain the inadequate absorption of Materna, but it could not explain the inadequacy of Stuartnatal which had no carbonate in it. Both products, however, contained magnesium oxide. Therefore, Drs. Allen and Seligman designed Study II to determine whether both calcium carbonate and magnesium oxide interfered with iron absorption. They suspected the interference was caused by a combination of calcium and magnesium salts. As was the case with Study IA, Dr. Ellenbogen did not make a prestudy visit. With necessary University clearances, Drs. Allen and Seligman performed Study II in October and November 1979.

On December 4, 1979 Dr. Allen wrote to Dr. Ellenbogen and advised him of the results of Study II. The letter bears quotation:

> I believe that the results strongly indicate that magnesium oxide . . . and calcium carbonate all decrease iron absorption in humans. . . . Based on the studies that we have performed to date, I believe that iron absorption from prenatal capsules could be increased markedly if calcium sulfate were used in place of calcium carbonate, if the amount of magnesium oxide was reduced or omitted entirely. . . .

Even at this point there is no credible indication that Cyanamid had any reformulation of Materna in mind.

Although Study II established that both calcium carbonate and magnesium oxide interfered with iron absorption, the point at which the effect begins to occur was not determined. Therefore, from February 8 through 19, 1980, Drs. Allen and Seligman conducted Study IIA. This study was performed without a protocol from Cyanamid, without a prestudy visit by Dr. Ellenbogen and without any payment from Cyanamid in advance of the study.

In a March 4, 1980 letter Dr. Allen advised Dr. Ellenbogen of the results of Study IIA, which is the essence of the invention in question. The letter states:

> As we discussed, I believe that the next step would be for Lederle to reformulate their [sic] Materna preparation such that it contains 200 mg of calcium in the form of calcium carbonate and 25 mg of magnesium in the form of magnesium sulfate or magnesium oxide. . . . would expect that the absorption of iron from the new Materna would be similar to that of iron alone.

Two weeks after this letter, Dr. Ellenbogen prepared and sent a protocol for the already completed study to Dr. Allen. Cyanamid's in-house patent attorney Dr. Robert Raymond, who drafted the Patent, acknowledged the reformulation set forth in the foregoing letter is within the scope of the Patent later filed by Cyanamid. I find by clear and convincing evidence that the reformulation was the invention of Drs. Allen and Seligman and was communicated by Dr. Allen to Dr. Ellenbogen. I reject Dr. Ellenbogen's testimony to the contrary as not credible.

Dr. Ellenbogen thereafter asked Dr. Allen to perform another study (Study III) to measure iron absorption (1) from Stuartnatal, (2) from a formulation essentially the same as proposed by Dr. Allen (except that it included 250 rather than 200 mg. of calcium carbonate, but still within the scope of the Patent), and (3) from a formulation having 350 mg. of calcium carbonate. Each of the three formulations contained 25 mg. of magnesium oxide as recommended by Dr. Allen. Study III was performed in October 1980.

Cyanamid furnished a protocol for Study III and made a grant of $5,000 per composition for a total of $15,000. For the first time since Study I, Dr. Ellenbogen made a prestudy visit to the Health Sciences Center. As predicted by Dr. Allen, Study III disclosed enhanced iron absorption from the 250 mg. formulation and poor iron absorption from the formulation containing 350 mg. of calcium carbonate.

The next study, in March 1981 (Study IV), compared the reformulation of Materna with Stuartnatal and several other competing products and revealed iron absorption from the reformulated Materna was enhanced just as Dr. Allen said it would be from essentially the same reformulation he had disclosed to Dr. Ellenbogen and recommended in his March 4, 1980 letter. For Study IV Dr. Ellenbogen made what he had proclaimed to be the obligatory prestudy visit to the Health Sciences Center to satisfy good clinical practices. Cyanamid paid $5,000 per composition for a total of $30,000 and Cyanamid furnished a protocol in advance of the study.

5. The Publications.

As part of their academic regimen Drs. Allen and Seligman prepared an article for publication in a medical journal describing their studies and the results thereof (the "Article"). The first draft was completed in 1981 after Studies I through IV were completed. Consistent with academic custom, Drs. Allen and Seligman named themselves and their laboratory assistants who participated in the studies as co-authors. They did not name or consider Dr. Ellenbogen a co-author. This draft was submitted on July 27, 1981 to *The New England Journal of Medicine*. (On this side of the Atlantic, at least, it is the *ne plus ultra* of medical journals. Dr. Allen had already published articles in it.)

In keeping with their relationship, Dr. Allen sent Dr. Ellenbogen a copy of the Article on a confidential basis. Dr. Ellenbogen had no comments or suggestions for changes on the draft submitted to the *New England Journal of Medicine*.

The New England Journal declined to publish the Article. Drs. Allen and Seligman made minor changes in the draft and sent it to the *Journal of Obstetrics and Gynecology*, which published it in its March 1983 issue under the title "Measurements of Iron Absorption from Prenatal Multivitamin-Mineral Supplements" Before publication, Dr. Allen sent a copy to Dr. Ellenbogen.

As is typical with professional journals of the sort described, the *Journal of Obstetrics and Gynecology* wrote to Dr. Allen accepting the Article for publication. The letter advised, "that prior publication of any portion of this

article, including tables, figures or graphs, in other scientific journals or news media will void this publication agreement." Dr. Allen sent a copy of this letter to Dr. Ellenbogen. Later, Dr. Ellenbogen asked Dr. Allen for permission to order reprints of the published Article. I conclude based on the foregoing and the established relationship that Dr. Ellenbogen knew the Article, intended for *The New England Journal of Medicine*, – and specifically the tables, figures and graphs it contained – was confidential and that he was not to copy it in whole or in part or reveal any part of it without the express prior approval of Dr. Allen.

The focal point of scientific interest in the Article was Table I, which tabulated the results of Studies I, IA, II, III and IV. Table I presents the results of the studies in a distinctive format with four main columns, nine subcolumns and 12 rows. The results of these studies are presented in graph form in four figures.

6. The Patent.

Shortly after he received from Dr. Allen the draft of the Article submitted to *The New England Journal of Medicine*, Dr. Ellenbogen contacted Cyanamid's in-house patent department. Within weeks, the patent process was aweigh. The patent application copied information from the Article, replicated Table I and traced its four Figures.

The Cyanamid in-house patent counsel who prepared and filed the patent application, Dr. Raymond, knew that the studies were performed by Drs. Allen and Seligman. Dr. Ellenbogen, however, told Dr. Raymond that the role

of Drs. Allen and Seligman was merely technical and either told, or led Dr. Raymond to believe, that it was he, Dr. Ellenbogen, who designed the Studies, that Cyanamid had paid Drs. Allen and Seligman for their work on all of the Studies and that Dr. Allen was merely performing tests on materials provided to him under protocols prepared by Dr. Ellenbogen. This understanding of Dr. Raymond was flatly incorrect. Moreover, had Dr. Raymond been advised of the true facts, he would not have listed Dr. Ellenbogen as the inventor on the patent application as he did.

In August 1981 Dr. Ellenbogen filled out a Cyanamid company form called a "Record of Invention." This form contained a line for insertion of the date of conception of the invention. Cyanamid's internal document control policy provides that a Record of Invention form must be maintained in two separate places for the "*life* of the company." (emphasis in original.) The record of invention form completed by Dr. Ellenbogen is missing from both places where it was to be maintained and no copy has been located anywhere else. Dr. Ellenbogen testified that he does not remember the date he entered for the date of conception on the form.

On October 14, 1981 Cyanamid held a press conference and issued press releases describing the studies conducted by Drs. Allen and Seligman and announcing the reformulation of Materna. Dr. Allen attended the press conference and presented the studies and reformulation, but was not informed by anyone connected with Cyanamid that the company was preparing and intended to file a patent application on his and Dr. Seligman's invention.

The patent application was filed with the federal Patent and Trade Office on or about December 21, 1981, listing Dr. Ellenbogen as the sole inventor and containing Dr. Ellenbogen's oath stating he was the inventor. The Patent issued as U.S. Patent No. 4,431,634 in February 1984. Shortly thereafter Cyanamid gave Dr. Ellenbogen an award for being the inventor. Contrary to the established routines of their friendship, Dr. Ellenbogen did not advise Dr. Allen of his award, the issuance of the Patent or his listing on the application as the inventor. Dr. Allen did not learn about the Patent until June 1993.[1]

7. The Continuing Relationship.

In October 1982 at a meeting in San Francisco of the International Society of Obstetrics and Gynecology, Dr. Seligman made an oral presentation accompanied by posters. Dr. Ellenbogen attended the event and he and Dr. Seligman had a series of conversations. On the second night of the meeting, they went to Chinatown for dinner. Dr. Seligman complained that he was bored and wished Dr. Allen had told him how long he would need to stay at the meeting. Dr. Ellenbogen criticized Dr. Allen by saying he had helped Dr. Allen on a number of occasions and complaining, "It would have been nice if he could have helped me out. I should have been on the manuscript." Dr. Seligman replied, "It sounds like you've got some issues with Bob (Dr. Allen), and you should just give him

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[1] On October 21, 1981, Dr. Ellenbogen told Dr. Allen about an entirely different patent, but not the one at issue in this case.

a call." Dr. Ellenbogen mentioned that he had some patents and that Dr. Allen wasn't the only one who knew about patents. Dr. Ellenbogen, however, did not mention the Materna patent to Dr. Seligman.

By a letter dated October 5, 1984, Dr. Ellenbogen told Dr. Allen Cyanamid wanted to conduct a comparison study of iron absorption from reformulated Materna with that from Pramilet FA, a competing product. Pramilet included, *inter alia*, 250 mg. of calcium in the form of calcium carbonate and 10 mg. of magnesium in the form of magnesium oxide, having been so formulated since as early as 1979. Dr. Ellenbogen said he hoped to draft the protocol for the study in the near future and suggested it would be helpful if Dr. Allen could receive approval from the University before Dr. Ellenbogen forwarded the protocol.

Dr. Allen signed the Human Subject Committee form for the Pramilet study on November 7, 1984 and the University granted its approval on November 16, 1984. Dr. Ellenbogen sent the protocol for the Pramilet study to Dr. Allen on December 13, 1984 and Dr. Allen signed and returned it on December 28, 1984. Cyanamid paid a total of $15,000 for this study, half of it ($7,500) in January 1985.

On January 14, 1985 Cyanamid shipped bottles of Pramilet and Materna to Dr. Allen for his use in the Pramilet study. The labels on those bottles were covered with another label marked "FOR INVESTIGATIONAL USE ONLY" so that the patent notice was masked. The results of the Pramilet study were sent to Cyanamid on

February 26, 1985, and the University received final payment on May 22, 1985.

8. The Discovery.

In June 1993 Dr. Seligman received a letter from Barbara D'Alonzo, Senior Coordinator of Special Projects, Marketing Services Department of Wyeth-Ayerst Laboratories requesting permission to use and purchase reprints of the article, "Measurements of Iron Absorption from Prenatal Multivitamin-Mineral Supplements" which had appeared in the 1983 issue of *Obstetrics & Gynecology*. She indicated Wyeth-Ayerst intended to use the reprints for informing its sales representatives and its Medical and Medical Communications departments. She requested Dr. Seligman to send her a letter addressed to the editor of *Obstetrics & Gynecology* giving Wyeth-Ayerst copyright permission so it could be included in the purchase order.

At Dr. Allen's suggestion Dr. Seligman contacted Dr. Ellenbogen to see if he could tell them why Wyeth-Ayerst would want such a letter and what that company was doing in the area of prenatal vitamins. Dr. Seligman faxed the letter to Dr. Ellenbogen and a few days later Dr. Ellenbogen called Dr. Seligman and told him Wyeth-Ayerst had acquired Stuartnatal. Dr. Ellenbogen recapitulated his surprise and concern that people at Wyeth-Ayerst "would be looking at your manuscript." He said, "I can't imagine what they want to do with it, if it's Stuartnatal, but I was concerned about something that might be related to Materna, and we've got a patent on

that." Dr. Seligman describes this statement as being followed by a brief, pregnant pause and Dr. Ellenbogen immediately changing the subject to their families. Dr. Seligman remembers the conversation vividly because at that time he and his wife were expecting their third child and were gravely concerned about the possibilities of the child being born with Down's Syndrome. Shortly afterward, Dr. Seligman told Dr. Allen that Dr. Ellenbogen had mentioned something unusual about a patent related to the manuscript. Dr. Seligman's comprehension had been distracted by the change of subject to the impending birth. He said to Dr. Allen, "I don't know if Materna was used, but it was something. He was worried, but he's not worried anymore, and it was Stuartnatal." Dr. Allen then checked into the existence of a patent, learned there indeed was one and ordered a copy of it. When the Patent was received and examined by Drs. Allen and Seligman, they were both shocked to learn that the figures in the Patent had been lifted, indeed traced, from their *New England Journal* manuscript. Dr. Seligman exclaimed, "What a sleaze!" I find in this recounting, and in all other respects, that Dr. Seligman is a completely credible and persuasive witness.

No one connected with Cyanamid ever mentioned to Dr. Allen, Dr. Seligman or the other Plaintiffs the unauthorized use of the data and table in the Article, the prosecution of the Patent, the preparation and filing of an affidavit in support of the patentability of the invention averring that Dr. Ellenbogen instigated and supervised all the Studies, the issuance of the Patent, the award to

Dr. Ellenbogen for being named as inventor on the Patent, or the six civil actions asserting the Patent brought by Cyanamid against generic drug companies.

9. The Benefits.

After the Patent issued, Cyanamid brought six patent infringement actions against generic drug manufacturers. Each case settled by a stipulated injunction prohibiting further infringement of the Patent. As a result, Cyanamid had no generic competition from 1984 to the filing of this case. The other name brand prenatal vitamin did have generic drug company competition.

In 1980 University Patents, Inc. had a contract with the University of Colorado to license University inventions to third parties so the University would receive royalties. In that year, University Patents wrote to Dr. Ellenbogen requesting Cyanamid to execute a Confidential Disclosure Agreement so University Patents could disclose another of Dr. Allen's inventions to Cyanamid. That Confidential Disclosure Agreement stated the invention being disclosed belonged to the University and that University Patents was the University's "technology transfer manager".

Dr. Raymond reviewed the Confidential Disclosure Agreement for Cyanamid. In August 1981 University Patents sent another letter to Dr. Ellenbogen enclosing a copy of a patent application on one of Dr. Allen's inventions and stating that the disclosure was made pursuant to the previously described Confidential Disclosure Agreement. The first written communication between Dr. Ellenbogen and Dr. Raymond concerning patenting the

Materna reformulation occurred three days after that letter.

10. The University and its Patent Policy.

On December 15, 1977 the Regents approved the "Text Of A Revised Policy On Patents" (the "Policy"). This Policy called for the establishment of a patent committee for the University, which was charged to suggest to the President of the University commercial potentials of discoveries and "make recommendations as to whether such discoveries might be patentable, licensable and/or otherwise commercially developable."

The Policy required the President of the University, "upon recommendation of the Patent Committee," to designate a patent officer to be responsible for the day-to-day administration of the Policy. The patent officer was authorized to take certain steps in connection with the commercial exploitation of discoveries in which the University had an interest. The Policy is not a self-executing assignment of rights from an inventor to the University or its designee. Rather, each "included person" becomes obligated to assign any and all rights to the University when that person is aware of the need to do so.

Under the Policy, the term "included persons" refers to "all faculty members, fellows and staff employees" and the term "discoveries in which the University has an interest" includes "discoveries made while performing duties required by a third-party grant or contract and/or made with the use of University facilities and/or made as

a result of the use of funds supplies [sic] or administered by the University."

Drs. Allen and Seligman were and remain "included persons" subject to the Policy at all relevant times. Because Drs. Allen and Seligman invented the Materna reformulation, it is a "discovery in which the University has an interest." The doctors were and are required under the Policy to file a written report "within a reasonable time after the discovery is made and no later than its submission for publication." The University considers this reporting obligation a matter of critical importance. The University's publication, "A Guide to the Law of Patents for Scholars" states "[p]ublication of research results can proceed on a normal basis and patent rights can be preserved if the investigator submits a disclosure of his or her invention in a timely manner."

Neither Dr. Allen nor Dr. Seligman submitted the written disclosure mandated by the Policy. It is obvious why the doctors did not comply with their employer's policy in this instance, when Dr. Allen had with respect to other inventions: whilst Drs. Allen and Seligman are the inventors, it did not occur to them to take action independent of Cyanamid to determine whether their invention was patentable. When, however, the doctors discovered that Cyanamid had obtained a patent for the reformulation without naming them as the inventors, they did take immediate action which was entirely consistent with the Policy.

The University bases its interest in the invention on rights granted to it under the Policy. Dr. Ellenbogen, Dr. Raymond and thus Cyanamid were well-advised of the

Policy. There is no controversy between the University and the doctors that would redound to the benefit of Cyanamid. The pivotal fact is that Dr. Ellenbogen claimed credit with his employer for an invention which was not his. Dr. Raymond prepared and filed the patent application not knowing that Drs. Allen and Seligman were the inventors. Perforce, this litigation would not have ensued.

On July 31, 1985 the Regents and the Foundation executed a servicing agreement by which the University assigned to the Foundation "its entire right, title and interest in and to all rights to inventions, discoveries and other intellectual property in which it has an interest." The agreement also provided for the establishment of a University Committee on Intellectual Property to replace the Patent Committee specified in the Policy. The effect of the servicing agreement was to transfer from the University to the Foundation any rights or interests it might acquire to inventions.

On August 1, 1993 the Foundation and University Patents executed a Recovery-Sharing Agreement by which University Patents assigned to the Foundation "any and all rights and claims it may have to [the Patent] . . . and against Lederle or any other third party regarding such patent or the invention covered by such patent." In return, the Foundation agreed to pay to University Patents 18.2% of all amounts collected as a result of the claims against Cyanamid if this action settled after commencement of the trial. University Patents agreed to cooperate with Plaintiffs.

The purpose of the Recovery-Sharing Agreement was to resolve any claims University Patents may have had as a result of the invention made, but not reported, during the pendency of the 1976 Servicing Agreement. After this action was filed, the doctors also assigned their rights to the invention to the Foundation.

11. The Damages.

Plaintiffs claim Cyanamid's fraud cost them the opportunity to benefit financially from the reformulation. According to Plaintiffs, a conservative approach to measuring their damages under their copyright, fraud and unjust enrichment theories is the value of the reasonable royalty they would have negotiated for an assignment or the exclusive licensing of the Patent to Cyanamid had they known of the patent application. To that amount would be added that portion of Cyanamid's profits that Plaintiffs would have received but for Cyanamid's fraud.

The evidence relating to damages under Plaintiffs' theories of relief is scant. There was no evidence attempting to quantify Cyanamid's profits or to distinguish among those profits attributable to the Patent, the copyright infringement, or otherwise, nor was any accounting performed or requested. Instead, the evidence regarding damages focused almost exclusively on the reasonable royalty Plaintiffs claim they would have negotiated with Cyanamid had they known of the [illegible]ns to patent the reformulation.

Plaintiffs' expert testified that a reasonable royalty in the pharmaceutical industry during the relevant time period would have been 10% of Cyanamid's net sales of

Materna, with an additional 1% to 2% of net sales if the license were exclusive and contained no initial payment. The expert relied on data summarized in several charts showing Materna's net sales from 1982 through 1995, projections of sales through the life of the Patent assuming proper patent enforcement and marketing of the Patent, and reasonable royalty fees based on those figures. The chart detailing Plaintiffs' actual damages, assuming a 12% royalty rate on Cyanamid's aggregate sales and an 8% statutory interest rate, is replicated in its entirety as Appendix 1 to this decision. The chart shows an aggregate amount of actual damages accrued through the life of the Patent to be $44,396,159. Cyanamid offered no evidence to dispute or contravene the expert's testimony or the sales figures upon which he relied, and I find them credible.

B. Conclusions of Law.

Applying these findings of fact to the applicable legal standards as I interpret them, I reach the following conclusions of law:

1. Standing.

Cyanamid contends the University, the Regents and the Foundation lack standing to assert their claims for fraud and unjust enrichment because Drs. Allen and Seligman did not assign their purported rights to the invention to the University as required by the Policy. Cyanamid relies on *Arachnid, Inc. v. Merit Indus., Inc.*, 939 F.2d 1574 (Fed.Cir.1991), a patent case in which plaintiff was deemed to lack standing to sue for an infringement

that occurred before plaintiff had obtained legal title to the patent under an agreement it executed with a consultant inventor. The *Arachnid* court found the agreement, which provided that any inventions conceived during the consultancy would be the property of plaintiff and "will be assigned" by the consultant to plaintiff, was merely "an agreement to assign" and did not, by itself, transfer patent rights to the plaintiff. *id.* at 1576, 1580.

Borrowing the *Arachnid* analysis, Cyanamid contends Plaintiffs lack standing to pursue their claims because Drs. Allen and Seligman did not comply with the Policy to assign their rights to their reformulation studies to the University until after this lawsuit was filed. I find *Arachnid* inapplicable and conclude the University, the Regents and the Foundation have standing to pursue common law claims against Cyanamid.

The standing requirement for a patent infringement claim is significantly higher than the standing necessary to state a claim under common law. This is because a patent gives an inventor greater rights to make, use or sell the invention than does the mere act of invention. *Arachnid*, 939 F.2d at 1578. The act of invention vests the inventor with a common law right to make, use or sell his invention while a patent vests the inventor with "the right to *exclude others*" from doing so. *Id.* (emphasis original). To enforce the greater patent right, "a plaintiff must necessarily have standing as comprehended by the patent statute." *Id.* at 1579.

No claim for patent infringement remains. Any assertion that the University, the Regents or the Foundation must prove standing "as comprehended by the patent

statute" to perfect a common law claim for relief against Cyanamid is contrary to *Arachnid* and is rejected.

2. Fraud.

Plaintiffs assert Cyanamid is liable under a theory of fraudulent nondisclosure for concealing the existence of the Materna patent and depriving them of the money they would have received had they been given the opportunity to use their reformulation invention commercially. Under Colorado law, the elements of a claim for fraudulent nondisclosure are: (1) concealment of a material existing fact that in equity and good conscience should be disclosed; (2) knowledge on the part of the party against whom the claim is asserted that such a fact is being concealed; (3) ignorance of that fact on the part of the one from whom the fact is concealed; (4) the intention that the concealment be acted upon; and (5) action on the concealment resulting in damages. *Kopeikin v. Merchants Mtq. & Trust Corp.*, 679 P.2d 599, 601 (Colo.1984) (en banc) (restating standard articulated in leading case of *Morrison v. Goodspeed*, 100 Colo. 470, 68 P.2d 458 (1937)).

I have already found that Dr. Ellenbogen did not invent the Materna reformulation and that the true inventors were Drs. Allen and Seligman.[2] Given the long-

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[2] Both sides spent significant time in their briefs and arguments debating the question of who invented the reformulation at issue as that term is defined in the patent statute. As I explain in the section of this opinion dealing with Cyanamid's affirmative defenses, Plaintiffs are not required to establish inventorship or ownership under the patent statute to state a common law claim for fraud or unjust enrichment. As set

standing friendship between Dr. Ellenbogen and Dr. Allen, and the confidential working relationship between Cyanamid and the University doctors, the filing of the patent application was a material fact that in equity and good conscience should have been disclosed. This is so regardless of who was named as the inventor: the fact that Dr. Ellenbogen was named only underscores the fraudulent nature of the nondisclosure, perhaps explaining the motivation behind it.

I find Dr. Ellenbogen deliberately concealed the application so that he could continue the beneficial relationship with Dr. Allen, while retaining for Cyanamid the financial and competitive benefits of the doctors' reformulation idea and for himself recognition and reward from his employer. Drs. Allen and Seligman acted on this concealment by continuing to work for and benefit Cyanamid, unaware that their idea had been appropriated and Cyanamid was attempting to exclude them and others from being able to use it in the future. They acted on the concealment by failing to seek to have their names included in the application or to prevent the issuance of the Patent in Dr. Ellenbogen's name. The concealment deprived the University and the Foundation of financial

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forth above, a higher level of inventorship or ownership is required to state a claim for patent infringement. We are no longer concerned in this case with inventorship for the purposes of the Patent Act, as Plaintiffs'-claim for infringement has been denied as a matter of law. We are concerned with the act of invention itself and the common law right to make, use or sell the invention that flows from it. I have determined that the act of inventorship in this case was that of the doctors, not Dr. Ellenbogen.

opportunities and prestige they would have enjoyed had their doctors been credited with the invention, and harmed Drs. Allen and Seligman both personally and professionally.

The doctors' failure to discover the fraud or to act to prevent or redress it was a result of the fraud itself and was justified under the circumstances. It was not attributable to any lack of diligence on their part or on the part of the University.

Cyanamid is liable for its own misconduct and is vicariously liable for that of Dr. Ellenbogen. Dr. Ellenbogen was acting at all times relevant to Plaintiffs' claims on Cyanamid's behalf and with its apparent authority. *See Grease Monkey Int'l, Inc. v. Montoya*, 904 P.2d 468, 473 (Colo.1995) (en banc) (citing Restatement (Second) of Agency § 257). Drs. Allen and Seligman, the University and the Foundation were injured as a result of this fraud and are entitled to relief.

3. Unjust Enrichment.

Cyanamid argues the claim for unjust enrichment must fail because Plaintiffs neither desired nor expected to be compensated for the Studies or for Cyanamid's use of the Studies to produce and market a reformulated Materna product. According to Cyanamid, Drs. Allen and Seligman shared the results of the Studies freely, encouraged Cyanamid to market the reformulated Materna product and sought no financial compensation in connection with its commercial distribution. Under such circumstances, Cyanamid asserts "any benefit realized by Cyanamid from such commercialization, whether from

the sale of the reformulated product, the issuance of the Patent or otherwise, cannot serve as the basis for a claim of unjust enrichment." Def.'s Trial Br. at 49 (emphasis added). I disagree.

Cyanamid misapprehends the nature of the unjust enrichment claim. The benefit at issue was not the use of the doctors' Studies and reformulation to make and market a reformulated Materna product. Rather, the benefit was the use of the doctors' Studies to claim credit for inventing the reformulation and to obtain a patent on it. The Patent allowed Cyanamid to assume ownership of the reformulation and to obtain monopoly profits by excluding others, including the doctors, from using or sharing it again.

So understood, the doctors' expectation of compensation (or lack thereof) for Cyanamid's pre-Patent use of the reformulation itself is immaterial. That the doctors did not expect to be paid for the reformulation's pre-Patent use does not mean they consented to Cyanamid's appropriation of their idea or are without a remedy for the very different benefits conferred.

To the extent the benefit at issue is the Patent, Cyanamid asserts Cyanamid could not have conferred such a benefit on it because only the Patent and Trade Office has authority to issue patents. Further, and because the Patent and Trade Office can only issue patents in favor of the true inventor, the "sole consequence" of any ruling that Drs. Allen and Seligman were the true inventors "would be the invalidation of the Cyanamid patent," not a claim for unjust enrichment. *See* Def.'s Trial Br. at 53-54. Cyanamid's arguments harken to the protruded tongues of

playground taunts and are utterly unpersuasive. Such casuistry ignores the venerable role of equity in our courts and the nature of a claim for unjust enrichment.

Unjust enrichment is an equitable doctrine that permits recovery when a plaintiff shows " '(1) that a benefit was conferred on the defendant by the plaintiff, (2) that the benefit was appreciated by the defendant, and (3) that the benefit was accepted by the defendant under such circumstances that it would be inequitable for it to be retained without payment.' " *Ninth Dist. Prod. Credit Ass'n v. Ed Duggan, Inc.*, 821 P.2d 788, 795 (Colo.1991) (en banc) (quoting *Cablevision of Breckenridge v. Tannhauser Condominium Ass'n*, 649 P.2d 1093, 1096-97 (Colo.1982)). The scope of the remedy for unjust enrichment is broad, centering attention " 'on the prevention of injustice.' " Id. (quoting Palmer, Law of Restitution § 1.1 (1978)).

I conclude that a benefit was conferred on Cyanamid by Plaintiffs and that Cyanamid appreciated this benefit. Cyanamid used the Studies to obtain a patent on the doctors' original idea for the reformulation and deliberately concealed its actions. The Patent allowed Cyanamid to exclude generic manufacturers from the prenatal vitamin market and to obtain a higher price for its product than it could have without it. "A person confers a benefit upon another if he . . . in any way adds to the other's security or advantage." Restatement of Restitution § 1, comm. b (1937). The definition of benefit contained in the Restatement is broad, *Cablevision*, 649 P.2d at 1097, and

includes the profits and other advantages Cyanamid gained by patenting Plaintiffs' invention.[3]

The argument is unpersuasive. Clearly Cyanamid perceived a benefit to patenting the reformulation or it would not have incurred the time and expense to do so. Among the benefits, Cyanamid was able to exclude generic drug companies from competition.

The circumstances under which Cyanamid obtained this advantage make it inequitable for Cyanamid to continue enjoying it without compensating Plaintiffs.

4. Cyanamid's Affirmative Defenses.

Cyanamid asserts a panoply of affirmative defenses to Plaintiffs' claims, each of which I find unpersuasive.

Cyanamid asserts the claims of Drs. Allen and Seligman are barred by statutes of limitations, and that the claim for unjust enrichment is also barred by the equitable doctrine of laches. I reject both assertions based on my finding that the failure of Drs. Allen and Seligman to file their claims within the applicable limitations periods was the result of the very conduct for which relief is sought, namely the fraudulent concealment of the fact of

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[3] Cyanamid contends there is no legal basis for awarding Plaintiffs any share of Cyanamid's post-Patent profits. Cyanamid asserts it began selling reformulated Materna before it obtained the Patent and did not need the Patent to continue doing so. Because it would have generated its profits even without the Patent, Cyanamid concludes Plaintiffs are not entitled to any share of them.

the patent application and the naming of Dr. Ellenbogen as the reformulation's inventor.

Cyanamid is prohibited from invoking the doctors' reliance on its fraud to raise a procedural bar to a claim seeking a remedy for the fraud itself. Doing so would allow Cyanamid to benefit from its own misconduct in violation of established Colorado law. *See, e.g., Rosane v. Senger,* 112 Colo. 363, 149 P.2d 372, 375 (1944) (articulating common law concept that a wrongdoer should not be able to take advantage of his own wrong), applied in *Smith v. Boyett,* 908 P.2d 508, 512 (Colo.1995) (en banc); *First Interstate Bank v. Piper Aircraft Corp.,* 744 P.2d 1197, 1200 (Colo.1987) (recognizing fraudulent concealment as basis for tolling statutes of limitation)

The defense of laches is rejected under the analogous equitable doctrine of unclean hands.

I also reject Cyanamid's defense based on Rule 12(b)(6) that Plaintiffs cannot prove they suffered harm as a result of Cyanamid's conduct. Cyanamid contends Plaintiffs are precluded from establishing this necessary element of their fraud and unjust enrichment claims because Drs. Allen and Seligman (1) "neither desired nor expected to benefit financially" from the invention and, instead, (2) "inten[ded] for all manufacturers of prenatal multivitamin supplements to use the invention free of charge." Pretrial Order (Statement of Claims and Defenses), p. 4. Again, these statements do not support a conclusion that Plaintiffs were not harmed by Cyanamid's simultaneous covert actions of claiming credit for the invention and securing for itself the exclusive right to market and profit from it.

As explained in *Arachnid*, a patent enlarges the " 'natural' right" of an inventor "to make, use and sell [his] invention" by "adding to it the *right to exclude others* from making, using or selling the patented invention." 939 F.2d at 1578 (emphasis original). When Cyanamid patented the reformulation, it secured for itself the exclusive right to make, use and sell, and therefore to profit from, it. Once this was accomplished, the doctors' original intent to share their invention and to forego any financial benefit from it was thwarted and cannot be used to defeat a claim based on the later, or then undiscovered, misconduct.

Cyanamid thwarted the doctors' original intent through fraud under circumstances where retention of the benefits of such fraud would be unjust. Therefore, it cannot now point to this original intent to argue the doctors were not harmed by Cyanamid's intervening misconduct. Doing so is akin to denying the victim of theft a remedy because the item stolen was originally intended as a gift for someone else.

Finally, Cyanamid contends Plaintiffs' claims are preempted by the Supremacy Clause of the United States Constitution because they are an attempt to obtain patent remedies in the absence of a patent. Quoting *Darling v. Standard Alaska Prod. Co.*, 818 P.2d 677 (Alaska 1991), *cert. denied*, 502 U.S. 1097, 112 S.Ct. 1176, 117 L.Ed.2d 421 (1992), Cyanamid asserts the "enforcement of [Plaintiffs'] unjust enrichment claim would clearly hamper free exploitation of ideas which are in the public domain, without affecting the existing incentives inventors have for disclosure." Def's Trial Br. at p. 62.

The distinction between the instant case and *Darling* is obvious. In *Darling*, the defendants copied samples of an invention that plaintiff sold to them in an arms-length transaction after plaintiff had unsuccessfully sought to patent the invention. Finding the invention to have been in the public domain at the time it was copied, the *Darling* court determined "[d]efendants received nothing more than that which they were legally entitled to use [and] were not unjustly enriched." 818 P.2d at 679 n. 4. Under these circumstances, plaintiff was seeking in equity that which he could not obtain under the patent laws, namely, the royalty or profit to which he would have been entitled had his attempt to patent his invention been successful. Accordingly, his claim was preempted under the Supremacy Clause.

In the instant case, by contrast, Cyanamid did much more than simply use and market an idea that was in the public domain: Cyanamid patented it. Relying on stealth and deception to claim credit for the reformulation, Cyanamid obtained a patent to exclude others from using the reformulation and to secure for itself monopoly profits for its manufacture and sale. In doing so, it removed the reformulation from the free marketplace of ideas in direct contravention of the wishes of those who invented it. This is categorically different from defendant's conduct in *Darling*, which had no effect on the ability of others to copy and use an invention that remained, after defendants' use, in the free marketplace of ideas.

The facts that the Patent was obtained, and that Cyanamd used fraud in obtaining it, distinguish this case from *Darling* and render the Supremacy Clause inapplicable.

5. Damages – Copyright Infringement.

I have already determined on summary judgment that Plaintiffs have satisfied the requisite elements of their copyright cause of action as a matter of law. In *Cyanamid I*, 880 F.Supp. at 1403, *mot. recons. denied, Cyanamid II*, 902 F.Supp. at 224, I found Figures 1-4 and Table 1 of the Article constituted copyrightable subject matter entitled to protection, and determined Cyanamid unlawfully copied the Figures and Table into its patent application. Cyanamid I at 1402. Left for resolution at trial, however, was the question of whether Plaintiffs could show damages related to the infringement.

The copyright Act provides that the copyright owner is entitled to recover both "the actual damages" suffered as a result of the infringement "and any profits of the infringer that are attributable to the infringement and are not taken into account in computing the actual damages." 17 U.S.C. § 504(a)(1). According to the legislative history, damages are awarded to compensate the copyright owner for losses from the infringement and profits are awarded to prevent the infringer from unfairly benefiting from a wrongful act. *See* Notes of Committee on the Judiciary, H.R. No. 94-1476 (set forth in the Historical and Statutory Notes at 17 U.S.C.S. § 504).

As actual damages for Cyanamid's copyright infringement, Plaintiffs seek an amount equal to what they "would have agreed to as a fair price for licensing the reformulation to Defendant." Pls.' Trial Br. on Damages, p. 4. In addition, and even in the absence of any actual damages, Plaintiffs claim they are entitled to those

post-Patent profits of Cyanamid attributable to the infringement. *Id.*, p. 5.

Plaintiffs' damages theory is problematic in the copyright context because it is the depiction of data, not the data itself, that is protected by the Act. Accordingly, Plaintiffs are entitled only to those damages and profits attributable to copying the Figures and Table into the patent application, not the reformulation depicted by them. Plaintiffs made no effort at trial to distinguish between damages attributable to the infringement and those attributable to the Patent itself.

Given this failure, and the fact Plaintiffs did not elect to recover an award of statutory damages under 17 U.S.C. § 504(c), I decline to award them either damages or profits under the Copyright Act. In doing so, I note the Act's stated purpose of "prevent[ing] the infringer from unfairly benefiting from a wrongful act" should be realized in this case through the award of damages for Plaintiffs' common law claims of fraud and unjust enrichment.

6. Damages – Fraud and Unjust Enrichment.

I have determined that Cyanamid is liable to Plaintiffs both for fraud and for unjust enrichment. Devising an appropriate remedy based on the evidence presented at trial, however, has proved problematic. The difficulty stems from the conflict between the law of tort and of restitution, and the continuing debate on whether both legal and equitable relief is available for a single set of wrongs.

While I offer some observations on this conflict below, I conclude the dilemma is of little practical importance in this case. Plaintiffs' theory of damages is the same under both claims: Plaintiffs claim they were damaged by the amount they would have been able to obtain from Cyanamid as a reasonable royalty or licensing fee and Cyanamid was benefitted by its misconduct in the same amount. Although Plaintiffs purport to seek a share of Cyanamid's profits in the form of a disgorgement, they have offered no evidence as to what those profits, or their share of them, might be.

a. Fraud

With respect to Plaintiffs' claim for fraud, I have already determined that Cyanamid copied the doctors' idea for the reformulation into their patent application; misrepresented that it was Dr. Ellenbogen, not the doctors, who invented the reformulation; concealed the application and the misrepresentation from the doctors and the University; and then concealed the fact that it had obtained and was enforcing exclusive rights to the idea. In short, Cyanamid defrauded the doctors of their idea, making that idea its own.

That idea, regardless of the doctors' original intent to give it away for free, belonged to them and their employer and had valued [sic]. The loss of this value is an element of actual damage for which Plaintiffs are entitled to be compensated.

The only evidence presented at trial attempting to quantify this loss was Plaintiffs' tables and expert testimony projecting Cyanamid's net sales of reformulated

Materna through the life of the Patent and identifying the reasonable royalty Plaintiffs could have expected had they assigned or transferred exclusive rights to the reformulation to Cyanamid. Cyanamid offered no evidence to dispute the sales figures or the royalty calculations, and I accept them as fact.

I find Plaintiffs' reasonable royalty calculation – figured as a 12% share of Cyanamid's annual Materna sales through the life of the Patent – to be an appropriate measure of the stolen idea's value.

In addition to these actual damages for Cyanamid's fraud, I find Drs. Allen and Seligman are individually entitled to an award of punitive damages. Dr. Ellenbogen and Cyanamid betrayed the doctors' trust and exploited their work for pecuniary gain. Although we will never know the complete scope of the effect this had on the doctors' careers and life paths, I find beyond a reasonable doubt that Cyanamid's actions were "attended by circumstances of fraud, malice, or willful and wanton conduct" such that: Drs. Allen and Seligman are entitled to an award of reasonable punitive damages pursuant to Colo.Rev.Stat. § 13-21-102(1)(a).

In awarding exemplary damages to Drs. Allen and Seligman, I am perforce drawing a distinction between them and the institutional plaintiffs. The University and the Foundation have an interest in the doctors' invention and this interest was unequivocally known to Cyanamid. Indeed the Policy was specifically brought to Cyanamid's attention just three days before Dr. Ellenbogen contacted Dr. Raymond about patenting the Materna reformulation.

Under Colorado law, a trier of fact, whether judge or jury, is vested with the discretion to allow or deny exemplary damages. *Sanders v. Knapp*, 674 P.2d 385, 388 (Colo.App.1983). I am mindful that exemplary damages are not intended to compensate an injured plaintiff, but to punish the defendant and to deter others from similar conduct. *Leidholt v. District Court*, 619 P.2d 768, 770 (Colo.1980). Moreover, Colorado courts have observed that the statute authorizing the award of exemplary damages reflects the General Assembly's intent to require a minimum degree of civility so that recourse to more violent methods is not taken by its defrauded citizens. *Mailloux v. Bradley*, 643 P.2d 797, 799 (Colo.App.1982).

It is fair game to be outsmarted in a business transaction, but not to be defrauded. The law marks the boundaries between the two; one is fair and the other is foul. Not every case entitling a plaintiff to actual damages for fraud, however, entitles one to an award of exemplary damages. The statute is aimed at the circumstances surrounding or attendant upon the fraud. In this case those circumstances relate directly to the rights of the doctors whereas the rights of the institutional plaintiffs are essentially derivative.

Cyanamid is a leviathan in an industry that depends upon scientific research. Its employee, Dr. Ellenbogen, is a scientist himself. Every scientist knows that imagination, insight and invention are at the very heart of this endeavor and must be respected if research is to survive at all. The imagination, insight and invention in this case were manifested by Dr. Allen and Dr. Seligman.

Cyanamid wantonly disregarded the integrity of the doctors' research – not just through Dr. Ellenbogen's deception and clandestine conduct, but through Cyanamid's failure to establish procedures to prevent such exploitation and to enforce the meager measures it had in place. Cyanamid's indifference and its consequent injury to the fragile nature of the creative process in scientific research cannot go unnoticed or unpunished.

There is no matrix for exemplary damages, nor do they have a defined, precise relationship to actual damages. In determining the amount of exemplary damages to be awarded Dr. Allen and Dr. Seligman, I am not basing that award on the enormity of the actual damage sustained by all Plaintiffs nor the relationship of the doctors to the other plaintiffs. Rather, I base it on Cyanamid's cynical disregard of these doctors as scientists. Its only concern in initiating the research on prenatal vitamins was to deflate the puff of a competitor. On the contrary, these physicians were dedicated to solving a problem that constituted a serious threat to the health of pregnant women so dedicated that they continued the research on their own. When Cyanamid recognized the profit that could be made, it pillaged the doctors' invention as so much booty. This conduct is not merely a question of stepping over the line; it is a departure from the game itself. The amount of the reasonable punitive damages awarded each is $500,000.

b. Unjust Enrichment

The scope of the remedy for unjust enrichment "is broad, cutting across both contract and tort law, with its

application guided by the underlying principle of avoiding the unjust enrichment of one party at the expense of another." *Cablevision*, 649 P.2d at 1097 (citing 1 G. Palmer, The Law of Restitution § 1.1 (1978) and 66 Am.Jur.2d Restitution and Implied Contracts § 11). Simply applying the principle of unjust enrichment to the facts presented, I have concluded that the benefits realized by Cyanamid include Cyanamid's post-Patent profits attributable to the Patent, as well as any other industry or market advantages Cyanamid gained as a result of having the Patent. To prevent the injustice that would result if Cyanamid were permitted to retain these ill-gotten gains, the law of restitution would require me to order Cyanamid to disgorge them.

However, my earlier determination that Plaintiffs are entitled to an award of damages for fraud gives rise to the dilemma to which I alluded above: Where a plaintiff is awarded damages to compensate him for a loss but the loss is different from the benefit received by defendant, must the defendant also disgorge that benefit?

In general, civil law organizes and conceptualizes wrongs in terms of the harms they cause the plaintiff rather than the benefits they generate for the defendant, seeking to remedy wrongs by compensating for injuries rather than requiring the wrongdoer to give up the benefits of his misdeed. The law of restitution, and in particular the principle of unjust enrichment, is an exception to this general rule. *See* C. Wonnell, Replacing the Unitary Principle of Unjust Enrichment, 45 Emory L.J. 153 (Winter 1996); N. McBride & P. McGrath, The Nature of Restitution, 15 Oxford J. Legal Stud. 33, 44-45 (1995).

Intellectual property law provides precedent for awarding both harm-based and benefits-based remedies. As set forth above, for example, a plaintiff may recover both damages under the Copyright Act to compensate him for his loss and profits to prevent the infringer from unfairly benefiting from his wrongful act. 17 U.S.C. § 504(b). Some courts and scholars urge a similar approach to the damages provisions of the Patent Act, *see* Note, *Unjust Enrichment for Patent Infringement: a Novel Idea?*, 4 J. Intell. Prop. L. 123 (Fall 1996); c.f., E. Allan Farnsworth, *Your Loss or My Gain? The Dilemma of the Disgorgement Principle in Breach of Contract*, 94 Yale L.J. 1339 (1985) (eloquent discussion of the relative utility and nonutility of benefit-based approach to remedies in law of contracts), and the principle "straddles the line between the law of torts and restitution" as well. Wonnell, *supra*, at 167 (where defendant intentionally takes the property of another under circumstances in which one could have paid a competitive market price for the property, defendant is liable for harm caused unless the benefit received by defendant is greater, in which case defendant is liable for benefit). *See also Engel v. Engel*, 902 P.2d 442, 445 (Colo.App.1995) (where the benefit to defendant and loss to plaintiff do not coincide such that defendant has received benefit while plaintiff has suffered no loss, defendant must disgorge amount he has been enriched, citing Restatement of Restitution § 1, comment c).

However, fundamental to each of these remedial schemes is the principle that a plaintiff cannot recover twice for the same injury. In the copyright context, a plaintiff can only recover those profits of the infringer

"not taken into account in computing the actual damages." 17 U.S.C. § 504(b). Similarly a plaintiff should be entitled to the benefits gained through a defendant's misconduct only if those benefits are greater than the plaintiff's losses. In that case, it is well settled that the plaintiff can "waive the tort and sue in assumpsit" for the enrichment. Wonnell, *supra*, at 167-68.

While Plaintiffs in the instant case suggest the benefits to Cyanamid are greater than their loss, they have offered no evidence to support it. Rather, the evidence suggests Plaintiffs loss and Cyanamid's gain coincide: Plaintiffs were damaged in the amount of the reasonable royalty or licensing fee they should have received for their idea and Cyanamid benefitted in that same amount by not having to pay. Under these circumstances, there is no basis upon which to award Plaintiffs a share of Cyanamid's post-Patent profits over and above the 1981 value of the stolen idea.

V. CONCLUSION.

I find Cyanamid liable to Plaintiffs under each of the two remaining claims for relief in this case. Cyanamid's fraud and concealment robbed Plaintiffs of their valuable idea and allowed Cyanamid to obtain profits and market advantages justice precludes it from retaining. However, because Plaintiffs' only attempt to quantify Cyanamid's profits was with the same evidence used to establish their actual damages for fraud, I decline to order disgorgement or otherwise award Plaintiffs a share of Cyanamid's post-Patent profits.

I find Cyanamid's conduct to have been attended by circumstances of fraud beyond a reasonable doubt such that Drs. Allen and Seligman are entitled to an award of punitive damages in a reasonable amount I have determined to be $500,000 each. Accordingly,

IT IS ORDERED that judgment shall enter in favor of Plaintiffs and against Cyanamid on Plaintiffs' claims for fraud and unjust enrichment in the amount of $44,396,159, which is 12% of the aggregate actual and projected net sales of the reformulated Materna prenatal vitamin from the time of the fraud in 1981 through the life of the Patent, assuming an annual statutory interest rate of 8%.

IT IS FURTHER ORDERED that Cyanamid pay to Drs. Allen and Seligman $500,000 each in punitive damages pursuant to Colo.Rev.Stat. § 13-21-102(1)(a).

IT IS FURTHER ORDERED that no damages are awarded to Plaintiffs for Cyanamid's copyright infringement.

IT IS FURTHER ORDERED that Plaintiffs shall have judgment for their costs herein expended.

[Appendix I Omitted In Printing]

The UNIVERSITY OF COLORADO FOUNDATION, INC., a Colorado Not-for-profit Corporation, the University of Colorado, an Institution of the State of Colorado, the Board of Regents of the University of Colorado, a Body Corporate of the State of Colorado, Robert H. Allen, an Individual, and Paul A. Seligman, an Individual, Plaintiffs,

v.

AMERICAN CYANAMID, a Maine Corporation, Defendant.

Civ. A. No. 93-K-1657.

United States District Court, D. Colorado.

Oct. 26, 1995.

Robert N. Miller, LeBoeuf, Lamb, Greene & MacRae, L.L.P., Denver, CO, for plaintiffs.

Daniel J. Thomasch, Richard J. DeMarco, Jr., Donovan Leisure Newton & Irvine, New York City, for defendant.

ORDER ON MOTION FOR RECONSIDERATION

KANE, Senior District Judge.

In this action, The University of Colorado Foundation, Inc. ("Foundation"), The University of Colorado ("University"), The Regents of the University of Colorado ("Regents"), Robert H. Allen and Paul A. Seligman (collectively "Plaintiffs") allege Defendant American Cyanamid Company ("Cyanamid") wrongfully filed and obtained a patent on a reformulated prescription prenatal vitamin called "Materna."

In its second amended complaint, Plaintiffs claimed relief for (1) conversion, (2) fraud, (3) wrongful naming of inventor, (4) copyright infringement, (5) misappropriation, (6) patent infringement, (7) breach of confidentiality obligation, and (8) unjust enrichment.

In my April 3, 1995 memorandum opinion and order ("Order"), *inter alia*, I granted Plaintiffs' motion for summary judgment and denied that of Cyanamid on the cause of action for copyright infringement; granted Cyanamid's motion for summary judgment on the causes of action for conversion, wrongful naming of inventor, misappropriation and breach of confidentiality obligation but denied that motion as concerns the causes of action for fraud, patent infringement and unjust enrichment.

The case now presents on Cyanamid's motion for reconsideration of the Order with regard to my grant of summary judgment to Plaintiffs on the copyright claim and my denial of summary judgment to Cyanamid on the patent infringement, fraud and unjust enrichment claims. Alternatively, Cyanamid requests me to amend the opinion to state it involves controlling questions of law as to certain issues and to certify such amended opinion to the United States Court of Appeals for the Federal Circuit pursuant to 28 U.S.C. § 1292(b). I grant the motion insofar as it requests reconsideration with regard to the patent infringement claim but deny it in all other aspects.

The relevant facts are set out in the Order reported in *The University of Colorado Foundation, Inc. v. American Cyanamid Co.*, 880 F.Supp. 1387, 1390-92 (D.Colo.1995).

I. Motion for Reconsideration.

"A motion for reconsideration is proper when the court has 'made a mistake not of reasoning but of apprehension . . . [or] if there has been a significant change or development in the law or facts since submission.' " *FDIC v. Hildenbrand*, 892 F.Supp. 1317, 1319-20 (1995) (quoting *EEOC v. Foothills Title Guar. Co.*, 1991 WL 61012 at *3 (D.Colo. Apr. 12, 1991), *aff'd*, 956 F.2d 277 (10th Cir.1992)).

> When a court enunciates a rule of law in the course of a given case, the law of the case doctrine generally requires the court to adhere to the rule throughout the proceedings. . . . Courts have generally permitted a modification of the law of the case when substantially different, new evidence has been introduced, subsequent, contradictory controlling authority exists, or the original order is clearly erroneous.

Major v. Benton, 647 F.2d 110, 112 (10th Cir.1981) (citations omitted).

A. Patent Infringement Claim.

Cyanamid asks me to reconsider the Order denying its summary judgment motion on the patent infringement claim. The Order stated although Plaintiffs could not succeed in a claim for damages under the Patent Act because they did not have legal title as contemplated by the Act, Cyanamid had not shown as a matter of law the Plaintiffs could not establish themselves as equitable title holders of the patent entitled to equitable relief. *University of Colorado Foundation, Inc.*, 880 F.Supp. at 1397.

Cyanamid argues, assuming the facts alleged by Plaintiffs to be true, Cyanamid's patent covering the Materna reformulation would necessarily be invalid. It asserts *Kennedy v. Hazelton*, 128 U.S. 667, 9 S.Ct. 202, 32 L.Ed. 576 (1888), precludes Plaintiffs' claim for equitable infringement because there the Court held there can be neither equitable nor legal rights in an invalid patent.

Cyanamid maintains this case is distinguishable from *Arachnid, Inc. v. Merit Indus., Inc.*, 939 F.2d 1574 (Fed.Cir.1991), referred to in the Order. There, it was undisputed that the actual inventors obtained title to the patent at issue and the plaintiff based its equitable rights under the patent upon a contractual agreement that required defendant to assign ownership of the patent to plaintiff. Thus, unlike here, the claim in *Arachnid* did not involve an assertion that the patent had been fraudulently obtained nor did it otherwise require a finding of facts that would have the effect of invalidating the patent at issue.

Plaintiffs respond Cyanamid mischaracterizes their equitable claims as establishing a cause of action for "equitable patent infringement," precluded by *Kennedy* and *Arachnid*. Plaintiffs argue this preclusion cannot be extrapolated to the notion that there can be no equitable remedies at all. They cite numerous cases, including *Arachnid*, where equitable remedies have been expressly endorsed. *See Becher v. Contoure Lab.*, 279 U.S. 388, 49 S.Ct. 356, 73 L.Ed. 752 (1929); *Colgate-Palmolive Co. v. Carter Prods., Inc.*, 230 F.2d 855 (4th Cir.), *cert. denied*, 352 U.S. 843, 77 S.Ct. 43, 1 L.Ed.2d 59 (1956); *Saco-Lowell Shops v. Reynolds*, 141 F.2d 587 (4th Cir.1944); *Richardson v. Suzuki*

Motor Co., 868 F.2d 1226 (Fed.Cir.), *cert. denied*, 493 U.S. 853, 110 S.Ct. 154, 107 L.Ed.2d 112 (1989).

In *Kennedy*, plaintiff and defendant entered into an agreement in which defendant agreed to assign to plaintiff, and not to any other person, any patent that defendant might obtain for inventions relating to improvements in steam boilers. 128 U.S. at 668, 9 S.Ct. at 202. Thereafter, defendant made such invention and, "with intent to evade his agreement and to defraud the plaintiff, procured a patent for this invention to be obtained upon the application under oath of a third person as the inventor, and to be issued to him as assignee of that person. . . . " *Id.* at 671, 9 S.Ct. at 203. Plaintiff sought, by bill of equity, to compel defendant to assign the patent to him and to account for the profits received under it. *Id.*

In rejecting plaintiff's claim, the *Kennedy* Court held "a decree for profits can only proceed upon the ground that the plaintiff is at least the equitable owner of the patent, and there can be neither legal nor equitable ownership of a void patent." *Id.* at 672, 9 S.Ct. at 203.

Plaintiffs label their sixth claim for relief for "Patent Infringement" and term themselves "equitable owners of Cyanamid's patent," (Second Am. Compl. ¶ 75). On the basis of *Kennedy*, there can be no equitable ownership of a void patent and therefore Plaintiffs cannot be rewarded relief under their patent infringement claim. None of the cases relied on by Plaintiffs refute this.

Arachnid is distinguishable because there it was undisputed that the actual inventors obtained the patent at issue and the plaintiff based its claim to equitable rights under the patent upon a contractual agreement

that required defendant to assign ownership of the patent to plaintiff. Similarly, *Becher* involved "breach of contract or wrongful disregard of confidential relations, both matters independent of the patent law. . . . " 279 U.S. at 391, 49 S.Ct. at 357. *Colgate Palmolive Co.* concerned misappropriation of a trade secret resulting "from the employment of one to whom it had been imparted in the course of a former employment," 230 F.2d at 865; *Saco-Lowell Shops* required assignment of a patent based on ideas received by a licensor from a licensee in confidence during the development of an invention, 141 F.2d at 598; and *Richardson* concerned the misappropriation of a trade secret developed by plaintiff pursuant to a formal option and license agreement executed between the parties, 868 F.2d at 1242.

Plaintiffs' sixth cause of action is for patent infringement on the basis that they are the "equitable owners of Cyanamid's patent." Cyanamid's motion for reconsideration persuades me Plaintiffs cannot establish themselves as equitable title holders of the patent entitled to equitable relief. Accordingly, I grant Cyanamid's motion insofar as it requests reconsideration of the denial of summary judgment on the patent infringement claim.

B. Fraud and Unjust Enrichment Claims.

In its motion for reconsideration, Cyanamid argues for the first time that Plaintiffs' common law claims for fraud and unjust enrichment are preempted by the Supremacy Clause of the United States Constitution because allowing those claims would grant Plaintiffs a state law patent-like interest in conflict with the Patent

Act and because there is no "property" interest at stake in those claims.

These arguments essentially constitute a new summary judgment motion based on a defense never pled and filed without leave five months after the December 15, 1994 deadline for filing dispositive motions. Such arguments fall outside the purview of a motion for reconsideration, the purpose of which is to correct manifest errors of law or fact or to present newly discovered evidence. Accordingly, I do not consider them and deny Cyanamid's motion insofar as it seeks reconsideration of the Order denying summary judgment on Plaintiffs' claims for fraud and unjust enrichment.

C. Copyright Claim.

Cyanamid asserts issues of fact should have precluded summary judgment in Plaintiffs' favor on the copyright claim. It maintains the court erred in finding that a September 24, 1991 letter from Dr. Allen to Dr. Ellenbogen granting permission "to use and circulate the results of our studies" could not be construed to mean permission to use the graphs and table contained in the relevant manuscript. Cyanamid argues in so ruling I impermissibly afforded the benefit of inferences to Plaintiffs, the movants.

Cyanamid has not created a genuine issue of fact as to its contention that Dr. Allen's letter gave Cyanamid the right to copy the figures and table into a patent application. To the contrary, Drs. Allen and Ellenbogen and the lawyer who prepared Cyanamid's patent application

have all testified they did not intend to read it that way. Accordingly, I find no merit in Cyanamid's request for reconsideration on this ground.

Cyanamid further argues summary judgment on the copyright issue was inappropriate because, in denying Cyanamid's request for summary judgment based on statute of limitations grounds, I found factual issues existed as to whether Plaintiffs should have known of the patent, which precluded summary judgment. Cyanamid reasons at the time of trial a jury may conclude that Plaintiffs should have known of the patent before August 1990 and extrapolates, in that case, Plaintiffs' copyright claim would be barred by the statutes of limitations.

I found whether Plaintiffs should have known of the patent was a genuine issue of fact for trial. I did not find, nor does it follow, that whether Plaintiffs should have known of the copyright infringement is a genuine issue of fact. Knowledge of the existence of a patent is clearly distinct from knowledge that a particular patent application involved unauthorized copying of copyrighted material. Cyanamid has not persuaded me that granting summary judgment to Plaintiffs on their copyright claim involved a manifest error of law or fact nor has it presented newly discovered evidence warranting reconsideration.

II. Amendment regarding Controlling Questions of Law.

Cyanamid requests, in the event I deny its motion for reconsideration with respect to Plaintiffs' patent infringement, fraud and unjust enrichment claims, I amend the

opinion to state it involves controlling questions of law on two issues and that such amended opinion be certified to the Court of Appeals for the Federal Circuit.

Because I grant the motion for reconsideration with regard to the patent infringement claim, the first issue on which certification is sought is moot. The second issue concerns whether Plaintiffs' assertion of common law and equitable claims are preempted by the Supremacy Clause. As stated above, the issue of preemption was not raised in Cyanamid's motion for summary judgment and is not properly before me in its motion for reconsideration. Accordingly, I decline the request to amend the opinion.

III. Conclusion.

For the aforesaid reasons, I grant Cyanamid's motion insofar as it requests reconsideration of the denial of summary judgment on the patent infringement claim and grant summary judgment for Cyanamid on Plaintiffs' sixth cause of action. I deny Cyanamid's motion in all other aspects.

The UNIVERSITY OF COLORADO FOUNDATION, INC., a Colorado not-for-profit corporation, The University of Colorado, an institution of the State of Colorado, The Board of Regents of the University of Colorado, a body corporate of the State of Colorado, Robert H. Allen, an individual, and Paul A. Seligman, an individual, Plaintiffs,

v.

AMERICAN CYANAMID, a Maine corporation, Defendant.

Civ. A. No. 93-K-1657.

United States District Court,
D. Colorado.

April 3, 1995.

Glenn K. Beaton, Beaton & Swanson, Robert N. Miller, LeBoeuf, Lamb, Greene & MacRae, Denver, CO, for plaintiffs.

Roger P. Thomasch, Mark A. Wielga, Ballard Spahr Andrews & Ingersoll, Denver, CO, Daniel J. Thomasch, Donovan, Leisure, Newton & Irvine, New York City, for defendant.

MEMORANDUM OPINION AND ORDER

KANE, Senior District Judge.

This action commenced in August 1993. On September 30, 1994, The University of Colorado Foundation, Inc. ("Foundation"), The University of Colorado ("University"), The Regents of the University of Colorado ("Regents"), Robert H. Allen and Paul A. Seligman (collectively "Plaintiffs") filed a Second Amended Complaint alleging that Defendant American Cyanamid Company

("Cyanamid") wrongfully filed and obtained a patent on a reformulated prescription prenatal vitamin called "Materna." Plaintiffs claims for relief are for (1) conversion, (2) fraud, (3) wrongful naming of inventor, (4) copyright infringement, (5) misappropriation, (6) patent infringement, (7) breach of confidentiality obligation, and (8) unjust enrichment.

Before me are (1) Plaintiffs' motion for partial summary judgment on their causes of action for conversion, fraud, and copyright infringement, (2) Cyanamid's motion for partial summary judgment on the copyright infringement claim, and (3) Cyanamid's motion for summary judgment on all causes of action. I grant Plaintiffs' motion in part and deny it in part; deny Cyanamid's partial summary judgment motion and grant Cyanamid's motion for summary judgment in part and deny it in part.

Jurisdiction obtains under 28 U.S.C. §§ 1331 and 1338(a) because Plaintiffs seek relief under the Patent Act, 35 U.S.C. § 256 and the Copyright Act, 17 U.S.C. §§ 101-810. Jurisdiction is also founded on 28 U.S.C. § 1332 in that this action is between citizens of different states and the matter in controversy exceeds $50,000.00, exclusive of interest and costs.

I. Background.

Cyanamid began marketing its Materna multivitamin in the mid-1970's. In the late 1970's, a competitor of Cyanamid asserted that iron was not being sufficiently absorbed from Materna, due to interference from calcium carbonate which was present in Materna.

In late 1978 or early 1979, Dr. Leon Ellenbogen, a Cyanamid employee, agreed with Plaintiff Dr. Robert Allen, Director of Hematology and Professor of Biochemistry at the University of Colorado Health Sciences Center that Dr. Allen and Plaintiff Dr. Paul A. Seligman, a Professor of Medicine in the same division of hematology, would perform a study on patient volunteers to compare iron absorption from Materna with that from the competitor's product. Drs. Ellenbogen and Allen had known each other since the early 1970s and considered themselves trusted friends.

Although Dr. Ellenbogen had indicated he considered the existence of an iron absorption problem unlikely, he wanted to prove the competitor wrong. Drs. Allen and Seligman believed there might indeed be a problem. The fee for the study agreed upon between Dr. Ellenbogen on behalf of Cyanamid and Dr. Allen on behalf of the University was $5,000.00 for each of the compositions (Materna and the competitive product) for a total of $10,000.00.

In August 1979, the results of this study (Study I and Study IA) showed there was reduced absorption of iron from both Materna and the competitor's product.

On Dr. Allen's recommendation, Cyanamid engaged him to perform a further study to determine the extent of iron absorption from a composition containing only iron in the form of ferrous fumarate for the purpose of establishing a baseline for comparison with the results of the study on Materna and the competitive product. Cyanamid paid $5000.00 for that study. Drs. Allen and Seligman performed the study, the results of which validated

the conclusions of the earlier study that iron absorption from both Materna and the competitive product was probably insufficient to meet the needs of pregnant women.

Drs. Allen and Seligman then conducted research, allegedly independent of Cyanamid, to establish the reason for the poor iron absorption from Materna and the competitive product. In particular, they devised and performed two new studies (Study II and Study IIA) in which they tested whether various combinations of calcium carbonate, calcium sulfate and magnesium oxide interfered with iron absorption. Study II pinpointed the reasons for the poor iron absorption and Study IIA confirmed how Materna could be reformulated to improve iron absorption. Plaintiffs maintain Dr. Allen sent Dr. Ellenbogen letters as a courtesy, explaining the results of these studies and including the new formulation.

Thereafter, Dr. Ellenbogen asked Drs. Allen and Seligman to conduct two further studies (Study III and Study IV) to measure the iron absorption from several competing products and that from two new formulated versions of Materna, including the Study IIA suggested reformulation. Cyanamid paid $5000.00 per composition for these studies which were performed in late 1980 and early 1981. The studies established Dr. Allen's suggested reformulation, having reduced calcium carbonate and magnesium oxide, showed improved iron absorption.

Cyanamid maintains Dr. Ellenbogen designed the protocol to be followed in the initial study and this was the standard upon which a series of subsequent studies,

including Studies II and IIA, were based. Cyanamid contests Plaintiffs' claim that Cyanamid did not pay for Study IIA and states it paid $7,500 for the study, the first of two conducted in 1980.

Contrary to Plaintiffs' position, Cyanamid contends Dr. Ellenbogen conceived of the revised Materna product. Cyanamid cites the deposition testimony of Dr. Ellenbogen to the effect that a March 4, 1980 letter from Dr. Allen to Dr. Ellenbogen concerning a proposed reformulation was a confirmation of what Drs. Ellenbogen and Allen had previously discussed. Dr. Ellenbogen testified he believes the decision to reduce magnesium and calcium originated with him.

Cyanamid also relies on the testimony of Dr. Robert P. Raymond, counsel who prepared the patent application. Dr. Raymond testified that, in preparing the application in 1981, he relied on a memorandum prepared some time earlier by Dr. Ellenbogen. In Dr. Raymond's view the memorandum showed Dr. Ellenbogen conceived of the reformulation before the alleged March 1980 conception of Drs. Allen and Seligman. Neither Dr. Raymond nor Cyanamid can locate this memorandum. Dr. Raymond identifies it as one of the documents discarded in July 1993, before this action commenced, when Cyanamid's patent law department transferred from Connecticut to New Jersey. Plaintiffs dispute the existence of the memorandum.

In July, 1981, Drs. Allen and Seligman submitted a manuscript, authored by themselves and four of their assistants, entitled "Inadequate Iron Absorption From Many Prenatal Multivitamin-Mineral Supplements" to

the *New England Journal of Medicine*. Dr. Allen sent Dr. Ellenbogen a courtesy copy of the manuscript in confidence. The Article described Studies I, IA, II, III and IV, the reformulated version of Materna having reduced levels of calcium carbonate and magnesium oxide, and the improved iron absorption. The *New England Journal of Medicine* rejected the manuscript.

In December 1981, Drs. Allen and Seligman resubmitted the manuscript, with certain changes, to a medical journal called *Obstetrics and Gynecology*. Again, Dr. Allen sent Dr. Ellenbogen a courtesy copy of the revised manuscript in confidence. The manuscript, while acknowledging Cyanamid had paid for certain studies, did not name Dr. Ellenbogen as a co-author. Dr. Ellenbogen did not object to this. The manuscript was published in the March 1983 volume of *Obstetrics and Gynecology* (the "Article").

In 1981 and 1982, after Cyanamid had adopted a reformulated version of Materna containing reduced amounts of calcium and magnesium oxide, Cyanamid issued various press releases and held a press conference with Dr. Allen describing the studies and the enhanced iron absorption from the reformulated version. Plaintiffs state at the press conference, in each of the press releases, in correspondence with the U.S. Food and Drug Administration, and in numerous internal memoranda, Cyanamid credited Dr. Allen with the discovery that the reason for poor absorption before the reformulation was interference by calcium carbonate and magnesium oxide.

Drs. Allen and Seligman, as employees of the University, were subject to its patent policy. Under this policy,

inventions made by University employees using University facilities were to be assigned by the inventors to the University, subject to a royalty interest payable to the inventors personally. Any other assignment of such inventions could be made only by the University. The Foundation had a contractual relationship with the University for exploiting inventions of the University.

Plaintiffs claim the reformulation was invented by Drs. Allen and Seligman using University time and facilities and, therefore, under the University policy, Drs. Allen and Seligman were and are the equitable owners of the invention. Under the patent policy, Drs. Allen and Seligman were required to take certain measures to protect any claimed invention. Drs. Allen and Seligman did not take such measures in relation to the reformulation of the Materna multivitamin, allegedly because they did not realize they had discovered a patentable invention.

According to Plaintiffs, shortly after receiving the courtesy copy of the manuscript of the Article, Dr. Ellenbogen contacted a Cyanamid in-house patent attorney to discuss patenting the invention. Cyanamid then prepared a patent application using information, drawings and a table from the Article.

On December 21, 1981, Cyanamid filed a patent application in its own name, naming Dr. Ellenbogen as the sole inventor and Cyanamid as assignee. The application covered the reformulated version of Materna which Dr. Allen had described in the results of Study IIA. Cyanamid has since enforced its patent monopoly to prevent competition by various generic drug manufacturers.

After the studies described above, Cyanamid, through Dr. Ellenbogen, contracted with Drs. Allen and Seligman from time to time to perform additional studies involving the Materna multivitamin and other iron-containing preparations for agreed upon fees. These studies continued until 1989. Cyanamid and the University entered into formal agreements governing the parties' rights to intellectual property other than the reformulated version of Materna.

Plaintiffs maintain Cyanamid did not directly tell Drs. Allen or Seligman or the University anything about the patent related to the studies which issued in 1984 ("Patent"). Cyanamid disputes this and claims there was widespread availability of public information relating to the Patent and that Cyanamid began marking the Patent on Materna labels shortly after it issued. Plaintiffs claim they finally learned of the Patent in the summer of 1993 and then filed this action.

II. Standards for Summary Judgment.

Summary judgment is proper where the pleadings, depositions, answers to interrogatories and admissions on file, together with any affidavits, show there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law. Fed.R.Civ.P. 56(c); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S.Ct. 2548, 2552, 91 L.Ed.2d 265 (1986). In considering this motion, one must construe the factual record and reasonable inferences therefrom in the light most favorable to the non-moving party. *Cone v. Longmont United Hosp. Ass'n*, 14 F.3d 526, 528 (10th Cir.1994). The

mere allegation of a factual dispute will not defeat a properly supported motion for summary judgment. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256, 106 S.Ct. 2505, 2514, 91 L.Ed.2d 202 (1986). The non-moving party must point to specific facts, "by any of the kinds of evidentiary materials listed in Rule 56(c), except the mere pleadings themselves," to avoid summary judgment. *Celotex*, 477 U.S. at 324, 106 S.Ct. at 2553.

III. Merits.

1. Conversion.

Plaintiffs allege Cyanamid is liable for conversion by virtue of having "intentionally exercised dominion and control over Plaintiffs' invention by filing a patent application" and of having "wrongfully deprived Plaintiffs of Plaintiffs' right to control the invention by denying Plaintiffs the opportunity to license or otherwise exploit the invention." (Second Am. Compl. ¶¶ 54-55). Both Plaintiffs and Cyanamid maintain as a matter of law they are entitled to judgment on the conversion claim.

Under Colorado law "[c]onversion is defined as any distinct, unauthorized act of dominion or ownership exercised by one person over personal property belonging to another." *Glenn Arms Assocs. v. Century Mortgage & Inv. Corp.*, 680 P.2d 1315, 1317 (Colo.App.1984). "Although the act of conversion takes place at the time the converter takes dominion over the property, predicates to a successful claim for conversion are the owner's demand for the return of the property and the controlling party's refusal to return it." *Id.*

Plaintiffs preface their argument in support of the claim for conversion by stating that Drs. Allen and Seligman are the true inventors of the reformulated Materna because the reformulation was initially their conception. They cite *Burroughs Wellcome Co. v. Barr Laboratories*, 828 F.Supp. 1200, 1208 (E.D.N.C.1993), an action for patent infringement, where the court considered the issue of inventorship of the drug AZT used in treating Human Immunodeficiency Virus ("HIV") which causes AIDS. The *Burroughs* court held "[t]he key to determining inventorship is conception. 'Unless a person contributes to conception of the invention, he is not an inventor.' " *Id.* (citations omitted).

Plaintiffs maintain Drs. Alan [sic] and Seligman had a conception of the reformulated Materna before any conception by Dr. Ellenbogen, and therefore they are the true inventors and owners of the invention which, they maintain Cyanamid converted. Plaintiffs distinguish between the "invention" which they define as "an idea" and the "[p]atent rights to it [which] are property rights." (*See* Pls.' Reply Br. Supp. Pls. Mot. Partial Summ.J. at 18.) Defendants argue there are no reported decisions extending conversion under Colorado law to "inventions or ideas in general." (Defs.' Memo Law Supp. Mot. Summ.J. at 27.)

Colorado courts have not defined the parameters of "personal property" within the definition of conversion. What may be converted is discussed by W. Page Keeton et al. in *Prosser and Keeton on the Law of Torts* § 15 at 90-92 (5th ed. 1984). The authors state initially the only property subject to conversion was a tangible chattel that

could be lost and found. *Id.* at 90. The courts have subsequently relaxed this rule to allow conversion of intangible property rights in the following circumstances: (1) conversion of a document in which intangible rights are merged, e.g., a promissory note, check, bond, bill of lading or stock certificate; (2) conversion of a tangible object which was highly important to the exercise of an intangible right, e.g., a savings bank book, an insurance policy, a tax receipt, account books; (3) conversion of specific rights without an accompanying conversion of anything tangible, e.g. where a corporation refuses to register a transfer of the rights of a shareholder on its books. *Id.* at 90-91.

Plaintiffs maintain "[t]he cases uniformly allow conversion actions under the circumstances of the present case." (Pls.' Br. Opp. Mot. Summ.J. at 31.) However, in none of the cases cited by Plaintiffs, was a cause of action for conversion adjudicated.

Plaintiffs rely on *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed.Cir.), *cert. denied*, 493 U.S. 853, 110 S.Ct. 154, 107 L.Ed.2d 112 (1989) in support of their claim. The plaintiff in *Richardson* did not, however, assert a conversion claim. There the court awarded relief based upon defendant's misappropriation of a trade secret developed by plaintiff pursuant to a formal Option and License Agreement ("Agreement") executed between the parties. The Federal Circuit reviewed inconsistent findings rendered by the jury after a forty-seven day trial and concluded that plaintiff had disclosed an invention pursuant to the Agreement and that defendant, in violation of its formal obligation of confidentiality, wrongfully obtained a patent on the invention, naming two of its employees as

inventors. The Federal Circuit stated "[b]ased on the jury verdict, Richardson is entitled to ownership of the patents as against Suzuki." *Id.* at 1249.

Here, unlike in *Richardson*, Plaintiffs voluntarily disclosed the invention to Cyanamid and consented to Cyanamid's sale of the reformulated Materna product which, they claim embodies their invention. Plaintiffs cannot justify their conversion claim on the basis of *Richardson*, which not only concerned somewhat different facts, but did not involve a claim for conversion.

Plaintiffs reliance on other cases cited in *Richardson* in support of their conversion claim is similarly tenuous. Although in each of those cases the court ordered the assignment of patent rights, none concerned a cause of action for conversion. *See Colgate-Palmolive Co. v. Carter Products, Inc.*, 230 F.2d 855, 865 (4th Cir.), *cert. denied*, 352 U.S. 843, 77 S.Ct. 43, 1 L.Ed.2d 59 (1956) (assignment ordered due to misappropriation of a trade secret resulting "from the employment of one to whom it had been imparted in the course of a former employment"); *De Long Corp. v. Lucas*, 176 F.Supp. 104, 134 (S.D.N.Y.1959), *aff'd*, 278 F.2d 804 (2nd Cir.), *cert. denied*, 364 U.S. 833, 81 S.Ct. 71, 5 L.Ed.2d 58 (1960) (former employee's breach of no-competition clause and breach of covenant not to disclose trade secrets entitled former employer to assignment of patent rights); *Becher v. Contoure Labs., Inc.*, 279 U.S. 388, 391-92, 49 S.Ct. 356, 357-58, 73 L.Ed. 752 (1929) (assignment of patent ordered where employee filed patent application on invention of former employer after agreeing to keep secret information rendered to him by the employer); *Saco-Lowell Shops v. Reynolds*, 141 F.2d 587, 598 (4th Cir.1944) (requiring assignment of patent based

on ideas received by licensor from licensee in confidence during the development of an invention).

Plaintiffs also rely on *Stark v. Advanced Magnetics, Inc.*, 29 F.3d 1570, 1578 (Fed.Cir.1994). There, an alleged inventor brought an action requesting correction of inventorship of six patents assigned to the corporation and asserted related state law claims, including a claim for conversion. The district court granted summary judgment to the corporation with respect to correction of inventorship and dismissed the state law tort claims as barred by the three year statute of limitations. The Federal Circuit vacated the summary judgment as to the patent counts. It also vacated the dismissal of the state law tort claim because certain "complexities of facts and law were not explored by the district court" on the statute of limitations issue. Thus, neither the district court nor the Federal Circuit addressed the merits of any of the tort claims, including the cause of action for conversion.

Cyanamid cites *Liebowitz v. Maxwell*, 32 U.S.P.Q.2d 1683, 1686, 1994 WL 517456 (S.D.N.Y.1994) where the court dismissed plaintiff's claim for conversion of a trademark on the grounds that the kinds of intangible property for which actions of conversion had been recognized in Maryland were rights which had been incorporated in documents which were then converted, e.g., stocks and insurance policies. "Since defendants have not withheld anything tangible and even under Maryland's 'liberal' definition of conversion 'the initial focus continues to be on the tangible item withheld' plaintiffs' claim for conversion cannot stand." *Id.* (citation omitted).

Cyanamid also cites as persuasive authority *Miles, Inc. v. Scripps Clinic & Research Foundation*, 810 F.Supp. 1091, 1096 (S.D.Cal.1993). There the court refused to extend the law of California to permit a claim for conversion of a right to commercialize a "cell line," even though a cell line may be patented. The court noted "it is not uncommon for a person to have an intangible property right without a cause of action in conversion to protect that right." *Id.*

In *Mackay v. Benjamin Franklin Realty & Holding Co.*, 288 Pa. 207, 135 A. 613, 614 (1927), the court held that an action for conversion was not maintainable against a builder whose architect used another architect's ideas but never had possession of his plans. "We are aware that an action of trover and conversion can be maintained for almost any kind of personalty, including money, notes, bonds, certificates of stock, title deeds, etc., but no authority was cited and we know of none where such action has been sustained for something so intangible as an idea, not connected with physical property." *Id.*

In *Thompson v. Mobil Producing Co.*, the court held "[p]ersonal property is the subject of conversion 'if of a tangible nature, or if it is tangible evidence of title to intangible or real property.' " 163 F.Supp. 402, 404 (D.Mont.1958) (citing 89 C.J.S. *Trover & Conversion* §§ 11 and 12 and cases there cited). The court concluded that confidential oil information with respect to options to lease land was "not property which could be the subject of an action in conversion." *Id.*

Here, Plaintiffs do not claim any document confers an intangible right and that there has been conversion of

such document amounting to conversion of the right. Therefore the alleged conversion does not fall within the first two categories mentioned in W. Page Keeton et al., *supra* § 15 at 91. Plaintiffs appear to argue that the third type of intangible property conversion applies, i.e. that there has been a conversion of rights without the accompanying of something tangible. Courts have, however, limited this third category to where a corporation refuses to register a transfer of rights of a shareholder on its books. *See* W. Page Keeton et al., *supra* § 15 at 91 n. 30 and cases cited therein; *see also Calabrese Found., Inc. v. Investment Advisors Inc.*, 831 F.Supp. 1507, 1515 (D.Colo.1993) (applying Minnesota law, the court refused to extend the third category to the unauthorized transfer of funds).

The Colorado Supreme Court addressed a claim relating to conversion of an intangible right in *McLaughlin v. Clementi*, 144 Colo. 34, 355 P.2d 100, 104 (1960). The court held an order directing repossession of a permit without foreclosure or execution was a nullity and the seller's exercise of dominion over the permit amounted to conversion. The facts of *McLaughlin* bring it within the category of conversion of a document amounting to the conversion of an intangible right. I find no Colorado case recognizing conversion of an intangible right unaccompanied by a document evidencing title to that right.

After reviewing the authorities, W. Page Keeton et al. conclude that "[t]he process of expansion [of traditional conversion law] has stopped with the kind of intangible rights which are customarily merged in, or identified with some document." *Supra* § 15 at 92. Plaintiffs cite no authority, nor do I find any authority which leads me to

conclude that the Colorado Supreme Court would recognize a cause of action for conversion in the circumstances of this case. I therefore conclude Cyanamid is entitled to judgment as a matter of law on Plaintiffs' first cause of action for conversion.

2. Fraud.

Plaintiffs allege Cyanamid is liable for fraud because it "had an on-going duty to disclose to Dr. Allen the filing of the patent application related to the studies conducted by Dr. Allen, as a result of the continuing relationship of trust between Dr. Allen and Dr. Ellenbogen and as a result of the obligation of good faith and fair dealing arising out of the on-going contractual relationship between the parties, before, during and after the studies." (Second Am.Compl. ¶ 59.) They maintain Cyanamid failed to disclose to Plaintiffs that it "intended to and did file a patent application on the reformulated version of Materna invented by Drs. Allen and Seligman," (*id.* ¶ 60,) intending that "Plaintiffs would not demand their rights to the patent or object to the copying of portions of the Article" (*id.* ¶ 61). Plaintiffs contend they justifiably relied on Cyanamid's aforesaid failure to disclose and "were thereby damaged by the deprivation of the right to license and otherwise exploit the patent." (*Id.* ¶ 63.) Plaintiffs and Cyanamid seek summary judgment on the fraud claim.

Restating the *Colorado Jury Instructions*, the pertinent elements of fraud by non-disclosure are:

> (a) the defendant failed to disclose a past or present fact which it had a duty to disclose;

(b) the fact was material;

(c) the defendant failed to disclose the fact with the intent that the plaintiff take a course of action it might not take if it knew the actual facts;

(d) the plaintiff took such action or decided not to act relying on the assumption that the undisclosed fact did not exist or was different from what it actually was;

(e) the plaintiff's reliance was justified; and

(f) this reliance caused damage to the plaintiff.

C.J.I. – *Civ.3d*, § 19:2 and cases cited therein, especially *Kopeikin v. Merchants Mortgage & Trust Corp.*, 679 P.2d 599, 601 (Colo.1984) (confirming *Morrison v. Godspeed*, 100 Colo. 470, 68 P.2d 458, 462 (1937) as the leading case setting out the elements of fraudulent concealment or non-disclosure); *Ackmann v. Merchants Mortgage & Trust Corp.*, 645 P.2d 7, 13 n. 3 (Colo.1982) ("[t]he statement of the elements of fraud by concealment in the Colorado Jury Instructions is substantially similar to the articulation of those elements contained in our case law").

Whether Cyanamid had a duty to disclose its intention to and filing of the Patent application depends on who was the inventor of the reformulated version of Materna patented. If Drs. Allen and Seligman invented the reformulation, it would seem conscionable for Cyanamid to have advised them of its intention to file for the Patent; if not, there does not seem to be a basis for such duty.

Plaintiffs allege, and argue in affidavit, that they are the inventors of the reformulation and therefore justifiably assumed Cyanamid would inform them of its patentability. Cyanamid, on the other hand, argues, relying on the deposition testimony of Drs. Ellenbogen and Ray, that Dr. Ellenbogen conceived of the reformulation and was responsible for the protocol on which the relevant studies were based.

Because the material facts regarding inventorship are sufficiently disputed, I am unable to determine whether the elements of fraud by non-disclosure are satisfied. As I have noted, "[o]n a summary judgment motion, no margin exists for the disposition of factual issues, nor does such a motion serve as a substitute for trial when there are disputed facts." *Wilbourn v. Mostek Corp.*, 537 Fed.Supp. 302, 306 (D.Colo.1982). In these circumstances, it is inappropriate to grant summary judgment on the fraud cause of action.

3. Wrongful Naming of Inventor and Patent Infringement.

Cyanamid seeks summary judgment on Plaintiffs' third claim for wrongful naming of inventor and sixth claim for patent infringement. I address these claims together as both are premised on breaches of the Patent Act, 35 U.S.C. §§ 1-376.

Plaintiffs claim "Cyanamid's actions are in violation of Section 115 of the Patent Act, 35 U.S.C. § 115, which requires that the true inventors be named on a patent application." (Second Am.Compl. ¶ 65.) They maintain

that they are the "equitable owners of Cyanamid's patent," (*id.* ¶ 75), and "Cyanamid's manufacture and sales of the Materna multivitamin incorporating the invention of Drs. Allen and Seligman, without authorization from Plaintiffs, constitute willful infringement of Plaintiffs' equitable patent rights," (*id.* ¶ 76). On the basis of the alleged patent infringement, Plaintiffs seek, inter alia, damages and "[a]n order revising the name of the inventor on the patent to name only the true inventors, namely Drs. Allen and Seligman," (*id.* at 20).

a. Patent Infringement.

Cyanamid argues, even if plaintiffs were able to establish equitable rights to the Patent, those rights would not form a valid basis for Plaintiffs' sixth claim for relief because "[l]egal, not equitable, ownership in a patent is necessary for standing to maintain an action for damages based on a claim of patent infringement." (Def.'s Memo Law Support Mot. Summ.J. at 19.) Cyanamid maintains, since Plaintiffs cannot claim legal ownership of the Patent, they do not have standing to recover money damages under the Patent Act.

Cyanamid relies on *Arachnid, Inc. v. Merit Industries, Inc.*, where the court held: "The general rule is that one seeking to recover money damages for infringement of a United States patent (an action 'at law') must have held the *legal title* to the patent *during the time of the infringement.*" 939 F.2d 1574, 1578, 1579 (Fed.Cir.1991). The persons holding such legal title are " 'the patentee, his assignee, his grantee, or his personal representatives; and

none but these are able to maintain an action for infringement in a court of law.' " *Id.* (citing *Crown Die & Tool Co. v. Nye Tool & Mach. Works*, 261 U.S. 24, 40-41, 43 S.Ct. 254, 258, 67 L.Ed. 516 (1923)).

Arachnid concerned an ownership dispute over a patent that was issued to a consulting company (IDEA) whose employees invented a novel type of coin-operated electronic dart game. Kidde Recreation Products, Inc., not a party to the litigation, later purchased the patent which was then assigned to it. Plaintiff Arachnid obtained assignment of the patent against IDEA after it established IDEA employees had conceived of the invention during the course of a contractual relationship between Arachnid and IDEA. Pursuant to the contract, all inventions made by IDEA or its employees during the contract period, belonged to Arachnid. Arachnid sued Merit for alleged acts of patent infringement which occurred after the issuance of the patent to IDEA and before the court ordered assignment to Arachnid.

The Federal Circuit rejected Arachnid's " 'Back-to-the-Future' theory" that it had always been the owner of the patented invention and therefore had standing to sue for infringement occurring before it became the patent's legal owner. *Arachnid*, 939 F.2d at 1579. The court held that, pre-assignment, Arachnid could only assert equitable, not legal title to the patent and, accordingly, could not maintain an action at law for damages for infringement of patent.

Plaintiffs argue they seek an assignment of the patent, effective as of the date the patent issued, and an order establishing Cyanamid's holding of the Patent as

constructive trustee for their benefit. They assert the assignment should include the right to sue for past infringement to protect their interests in their patent held in trust by Cyanamid.

Plaintiffs attempt to distinguish *Arachnid* "factually and equitably from the present case." (Pls.' Br. Opp. Def.'s Mot. Summ.J. at 62.) There, the inventor was contractually obligated to assign the patent to plaintiff Arachnid, but did not do so. The defendant, a third party, had in good faith obtained a license to the patent from the inventor's company, IDEA. Therefore, Arachnid never held legal title, but only equitable title in the form of the right to receive an assignment during the time of the third party's infringement.

Plaintiffs argue under the Patent Act they were always the "true owners of the Patent rights," (*id.*), because, as the inventors, Drs. Allen and Seligman initially owned the patent and legal title could not be conveyed absent an assignment. Plaintiffs maintain "[t]he fact that Cyanamid applied its own name to the Patent does not give it legal title; the only way to obtain legal title is to be the inventor or to receive a valid assignment from the inventor." (*Id.* at 63.)

Plaintiffs have not overcome the clear statement in *Arachnid* that:

> A patent is a creature of statute, as is the right of the patentee to have a remedy for infringement of his patent. Suit must be brought on the *patent*, as ownership only of the invention gives no right to exclude, which is obtained only from the patent grant. In order to exercise that right, a

> plaintiff must necessarily have standing as comprehended by the patent statute.

Arachnid, 939 F.2d at 1578-79 (footnotes omitted).

Based on *Arachnid*, Plaintiffs cannot succeed in a claim for damages under the Patent Act since they do not have legal title as contemplated by the Act. Nevertheless, Plaintiffs seek not only damages but equitable remedies. These include the profits on the sale of Materna since the patent was issued, an order establishing Cyanamid as constructive trustee of its profits on the sale of Materna since the date the patent was issued, an order establishing Plaintiffs as the owners of right, title and interest to the patent as of the date of issuance of the patent and an order revising the name of the inventor on the patent. (Second Am.Compl. at 19-20.).

As the court acknowledged in *Arachnid*, "a federal district court has jurisdiction to determine a 'claim for infringement,' asserted by an adjudged equitable title holder, as a prerequisite to awarding *equitable* relief for that infringement." *Arachnid*, 939 F.2d at 1580. Here, unlike in *Arachnid*, Plaintiffs seek not only money damages, a remedy at law, but also equitable remedies.

Cyanamid has not shown, as a matter of law that Plaintiffs cannot establish themselves as equitable title holders of the patent entitled to equitable relief. Therefore, there is no basis for granting summary judgment as requested by Cyanamid on the sixth claim for relief of patent infringement.

b. Wrongful Naming of Inventor.

Plaintiffs claim the naming of Dr. Ellenbogen as the inventor on the Patent is in violation of 35 U.S.C. § 115. That section requires that "[t]he applicant shall make oath that he believes himself to be the original and first inventor of the . . . composition of matter, or improvement thereof, for which he solicits a patent." 35 U.S.C. § 115. Based on this alleged violation, Plaintiffs seek relief pursuant to 35 U.S.C. § 256 in the form of "[a]n order revising the name of the inventor on the patent to name only the true inventors, namely Drs. Allen and Seligman," (Second Am.Compl. at 20).

Section 256 provides in pertinent part:

> Whenever through error a person is named in an issued patent as the inventor, or through error an inventor is not named in an issued patent and such error arose without any deceptive intention on his part, the Commissioner may, on application of all the parties and assignees, with proof of the facts and such other requirements as may be imposed, issue a certificate correcting such error.

35 U.S.C. § 256.

Cyanamid first argues the Plaintiffs' cause of action based on § 115 is misplaced since that section does not create a private cause of action but only a duty between the patent applicant and the Patent and Trademark Office. Cyanamid relies on *Wise v. Hubbard*, 769 F.2d 1, 3 (1st Cir.1985). There the First Circuit affirmed the granting of summary judgment dismissing plaintiff's claim of conversion on the grounds that the three-year statute of limitations had expired. Plaintiff argued the limitations

period should have been tolled because, *inter alia*, defendant fraudulently concealed his actions in the face of the duty to disclose imposed by 35 U.S.C. § 115. The court rejected this argument, stating:

> This statute creates no duty between the patent applicant and the purported inventor. Instead, because the Patent and Trademark Office's interest is in rewarding the true inventor with the issuance of a letter patent, the sole duty created is between the applicant and the Office. Breach of this duty results in the patent being "unauthorized by law and void. . . . " *Kennedy v. Hazelton*, 128 U.S. 667, 672, 9 S.Ct. 202, 203, 32 L.Ed. 576 (1888).

Wise, 769 F.2d at 3. Plaintiffs offer no authority to the contrary but contend "the violation is of § 115, and the remedy is under § 256." (Pls.' Br. Opp. Def.'s Mot. Summ.J. at 59.)

Cyanamid points out that Plaintiffs' right to pursue a cause of action under § 256 is questionable since they do not advance such cause of action in their Second Amended Complaint. Although Plaintiffs do not frame a cause of action under § 256, they assert this court's jurisdiction based in part on § 256, (Second Am.Compl. ¶ 7), and pray for "[a]n order revising the name of the inventor on the patent to name the only true inventors, namely Drs. Allen and Seligman," (*id.* at 20). Accepting that such pleading suffices under notice pleading requirements, I address whether Plaintiffs' request for the correction of the inventor's name under § 256 is fitting.

Cyanamid claims § 256 is intended to permit correction of inventorship where error is inadvertent and

"without deceptive intent" and Plaintiffs' allegations of fraud on the part of Cyanamid render the section inapplicable. The rationale here is if the patentee applied for the patent with the deceptive intent of omitting an inventor, the patent is invalidated and cannot be corrected. *See General Elec. Co. v. Brandon*, 25 U.S.P.Q.2d 1885, 1887, 1992 WL 394933 (N.D.N.Y.1992).

Cyanamid acknowledges neither the Supreme Court nor the Federal Circuit has squarely addressed whether the words "without deceptive intent" in § 256 refer to the patentee, the omitted inventor, or both. Nevertheless, Cyanamid argues case law from the district courts supports the position that § 256 is inapplicable where a plaintiff alleges the defendant/patentee acted with deceptive intention when it failed to identify a true inventor.

Cyanamid relies on the recent decision of *McMurray v. Harwood*, 870 F.Supp. 917, 918-20 (E.D.Wis.1994) and cases cited therein. There, plaintiff, alleging his former employer wrongfully procured a patent on plaintiff's invention, sought correction of inventorship under § 256. In initially dismissing the action, the district court held plaintiff's § 256 claim deficient because that section 1) did not permit a complete substitution of one inventor for another; and 2) is not applicable where the error is a result of fraud on the part of the patentee. *Id.* at 918-20.

On a motion for reconsideration, the court recognized the 1982 amendments to § 256 permit the substitution of the name of the erroneously named patentee with that of the innocent inventor. However, the court held the

1982 amendments "did not overturn prior (and subsequent) authority which uniformly holds that § 256 does not permit 'correction' where the named person is accused of deception or fraud." *Id.* at 920-21. *See also General Elec. v. Brandon,* 25 U.S.P.Q.2d at 1887 (dismissing § 256 claim because "at a minimum there must be a lack of deceptive intention on the part of the person originally named as the inventor. . . . [and] the tenor of the complaint is that defendant did not mistakenly name himself as the sole inventor.")

Plaintiffs contend "the cases are mixed on whether deceptive intention by the defendant precludes correction by the plaintiff, but on balance they do not support Cyanamid's contention." (Pls.' Br. Opp. Def.'s Mot. Summ.J. at 59.) They maintain the *General Electric* case is not conclusive because the plaintiff did not mention § 256 in the complaint and the court noted most of the cases allowing correction where there was deception on the part of the defendant were decided before the 1982 amendments.

The court in *General Electric,* however, determined the claim as if it had been framed under § 256 and noted the " 'deceptive intention' language was not changed in the 1982 amendment." *General Electric,* 25 U.S.P.Q.2d at 1887. Further, *McMurray* confirms the 1982 amendments did not overturn uniform authority disallowing correction under § 256 where the named patentee is accused of deception. 870 F.Supp. at 920-21.

Plaintiffs reliance on *Stark v. Advanced Magnetics, Inc.,* 29 F.3d 1570, 1573 (Fed.Cir.1994) is misplaced. In *Stark,* the district court granted summary judgment to the

defendant after finding the plaintiff failed to exercise diligence in seeking correction of the patent at issue. The Federal Circuit noted "[t]he purpose of § 256 was to provide a remedy for a bona fide mistake in inventorship. S.Rep. No. 1979, 82nd Cong., 2d Sess. 7 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2401." *Id.* The court then reversed on the basis that § 256 does not require an omitted inventor must diligently bring a claim under it. *Id.* at 1574. The *Stark* court did not address the issue of whether § 256 permits a claim where an allegedly innocent plaintiff claims fraud on the part of defendant patentee.

Plaintiffs' reliance on *MCV, Inc. v. King-Seeley Thermos Co.*, 870 F.2d 1568 (Fed.Cir.1989) is also to no effect. There, the court acknowledged that, only if co-inventorship were found, would it then "tackle the question of whether nonjoinder was 'without deceptive intention' within the meaning of section 256." *Id.* at 1571. The Federal Circuit did not find co-inventorship and therefore did not reach the issue under consideration.

Similarly, Plaintiffs' reliance on *Manildra Milling Corp. v. Ogilvie Mills, Inc.*, 783 F.Supp. 1288 (D.Kan.1990) is not persuasive. There, the court allowed correction under § 256 of errors resulting from "errors in judgment" in addition to those resulting from "inadvertence, accident or mistake." *Id.* at 1291. The court relied on the holding in *In re Schmidt*, 293 F.2d 274, 278-79 (C.C.P.A.1961) which held § 256 should be given a liberal construction. However, as noted in *McMurray*:

> The liberal quality of the section derives from the fact that "innocent" errors should be easily and readily correctable on joint application. Not

> so where the parties are at each others' throats. Further, pursuant to § 256, the court may "order correction of the patent." Should the plaintiff demonstrate fraud, the patent would be per se invalid. Even the most "liberal" reading of § 256 can not turn the power to correct into the power to invalidate.

870 F.Supp. at 920-21 n. 1. I therefore conclude § 256 is not applicable here where Plaintiffs seek correction based on Cyanamid's alleged fraud and deception.

Plaintiffs argue

> [i]n any event, it may be premature to rule out the possibility as a matter of law that the naming of inventor was without deceptive intent at the time it occurred. . . . A jury may find that Dr. Ellenbogen is not the true inventor and that the Professors are, but that Cyanamid's naming of Dr. Ellenbogen was not intentionally deceptive but merely erroneous.

(Pls.' Br. Opp. Defs.' Mot. Summ.J. at 61.)

Once again, the remarks in *McMurray* are pertinent. Faced with plaintiffs' request to proceed with alternative theories under § 256, including the possibility that defendant acted without deception, the court stated: "Such a claim is so contrary to plaintiffs' original § 256 claim (and each of state theory) that it can hardly be deemed 'alternative.' Further, plaintiff's § 256 fraud claim would not be presented to the jury in any case because it has been dismissed as a matter of law." 870 F.Supp. at 920-21 (footnote omitted). I agree.

I therefore conclude, as a matter of law, Cyanamid is entitled to judgment on Plaintiffs' third cause of action for wrongful naming of inventor.

4. Copyright Infringement.

Plaintiffs and Cyanamid have filed cross-motions for summary judgment on this cause of action. In their fourth claim for relief, Plaintiffs allege the Article constitutes "an original work of authorship and is copyrightable subject matter," (Second Am.Compl. ¶ 67), and "Plaintiffs were the owner (sic.) of the copyright on the Article at the time portions of it were copied, including by means of tracing, and cutting and pasting, by Dr. Ellenbogen and/or the Cyanamid in-house patent attorney on behalf of Cyanamid," (*id.* ¶ 68). Plaintiffs maintain such actions of Cyanamid constitute copyright infringement. (*Id.* ¶ 69.) Plaintiffs seek, *inter alia*, Cyanamid's profits attributable to the copyright infringement and damages suffered by Plaintiffs due to the copyright infringement. (*Id.* at 20.)

Plaintiffs cite the requirements for establishing a copyright infringement case as follows:

> Reduced to most fundamental terms, there are only two elements necessary to the plaintiff's case in an infringement action: ownership of the copyright by the plaintiff and copying by the defendant.

3 Melville B. Nimmer & David Nimmer, *Nimmer on Copyright* § 13.01 (1994) (footnotes omitted).

a. Ownership of the Copyright.

Plaintiffs have obtained a copyright registration certificate in the name of the Regents from the Copyright Office "for both the Article as it was submitted to the *New England Journal* and the Article as it was submitted to *Obstetrics and Gynecology*." (Pls.' Br. Supp. Mot. Partial Summ.J. at 65). They claim "such certificates constitute prima facie evidence of ownership by the Regents." (*Id.*)

Cyanamid "disputes the legal import of plaintiffs' recently-obtained registration certificate." (Def's. Memo Law Opp. Pls.' Mot. Partial Summ.J. & Supp. Mot. Partial Summ.J. at 26.) It points out Plaintiffs first sought copyright registration certificates in December 1993, only after commencement of this lawsuit and more than ten years after publication of the Article containing the allegedly protected figures and table. Cyanamid correctly notes a certificate of registration is only prima facie evidence of the validity of the copyright if the registration is sought within five years of the first publication of the work. 17 U.S.C. § 410(c). Notably, however, "[t]he evidentiary weight to be accorded the certificate of a registration made thereafter shall be in the discretion of the court." *Id.*

Plaintiffs maintain the Regents "are quite obviously the owner, because the Article is a 'work made for hire' by the co-authors done within the scope of their

employment."[1] (Pls.' Reply Br. Supp. Mot. Partial Summ.J. at 29 n. 55) Plaintiffs argue Cyanamid has offered no evidence to rebut such ownership. I agree.

Cyanamid offers no evidence which places in issue the original authorship of the Article by Drs. Allen and Seligman, nor the Regents' entitlement to ownership of the copyright as their employer.[2] I therefore conclude Plaintiffs have satisfied the first requirement of ownership of the copyright.

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[1] The Copyright Act provides:

> **(a) Initial Ownership**. – Copyright in a work protected under this title vests initially in the author or authors of the work. . . .
>
> **(b) Works Made for Hire**. – In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and . . . owns all the rights comprised in the copyright. 17 U.S.C. § 201.

[2] The copyright infringement allegedly occurred in about December 1981 when Cyanamid submitted its patent application. The Article was accepted for publication in August 1982 and published in the March 1983 issue of *Obstetrics and Gynecology*. The Article as published reflects a copyright in 1983 by the American College of Obstetricians and Gynecologists. (Second Am. Compl., Ex. A at 362.) This is not discussed in the briefs. However, if Plaintiffs assigned the copyright to the American College of Obstetricians and Gynecologists, this would have occurred after the alleged infringement in December 1981.

Even if the copyright was assigned to the American College only after the infringement, it may affect the amount of damages arising out of the infringement. Conceivably, Plaintiffs cannot claim profits or damages attributable to the infringement for the period of assignment of the copyright.

b. Copying by Cyanamid.

Cyanamid points to no specific facts to dispute the figures and tables of the patent application are substantially similar to and are copied from the figures and tables of the Article. Cyanamid principally argues no copyright infringement occurred because Dr. Allen authorized it to copy the figures and table into the patent application and that such figures and table are not copyrightable subject matter. Cyanamid also contends any profits earned by Cyanamid are too attenuated to the alleged infringement to permit an award of such profits to Plaintiffs.

c. Authorization to Copy.

Cyanamid, relying on a September 24, 1981 letter from Dr. Allen to Dr. Ellenbogen, claims it had authority to copy the table and figures in the Article. That letter reads in pertinent part: "I am pleased to grant permission to you and Lederle Laboratories to use and circulate the results of our studies concerning the absorption of iron from prenatal multivitamin-mineral supplements prior to their publication." (Pls.' Br. Supp. Mot. Partial Summ.J., Att. E, Ex. 60.)

Plaintiffs counter this letter does not constitute evidence that Dr. Allen authorized Cyanamid to copy the figures and table from the Article. They maintain "[t]he reason was that scientific journals frown upon or outright prohibit the presentation of literal portions of articles to be published prior to the actual publication." (Pls.' Reply Br. Supp. Mot. Partial Summ. at 30.) Plaintiffs note Dr.

Ellenbogen was copied on a letter containing such prohibition from the *Journal of Obstetrics and Gynecology* when it accepted the Article. (Pls.' Br. Supp. Mot. Partial Summ., Att. E at 379 and Ex.67.) Moreover, Dr. Ellenbogen acknowledged this is a common type of prohibition by a journal. (*Id.* at 379.)

Thus, the evidence offered contradicts Cyanamid's contention that Dr. Allen authorized the copying of the figures and the table in the Article.

d. Copyrightable subject matter.

Plaintiffs seek copyright protection for Figures 1-4 and Table 1 of the draft Article submitted to the *New England Journal of Medicine*. (*See* Pls.' Br. Supp. Mot. Partial Summ., Att. E, Ex. 42.) The four figures employ bar graphs and data points to depict the results of Studies I, IA, II, III, and IV. Table I summarizes the results of several studies. Cyanamid argues the figures and table do not merit copyright protection and therefore summary judgment is appropriate for Cyanamid. I disagree.

"Liability for copyright infringement will only attach where *protected elements* of a copyrighted work are copied." *Gates Rubber Co. v. Bando Chemical Inds., Ltd.*, 9 F.3d 823, 833 (10th Cir.1993) (emphasis in original). In *Feist Publications, Inc. v. Rural Telephone Service Co.*, the Court held "facts are not copyrightable . . . compilations of facts generally are." 499 U.S. 340, 344, 111 S.Ct. 1282, 1287, 113 L.Ed.2d 358 (1991). The *Feist* Court after noting that facts

are uncopyrightable, discussed the requirement of originality in the compilation of the facts to render such presentation copyrightable:

> As discussed earlier, however, the originality requirement is not particularly stringent. A compiler may settle upon a selection or arrangement that others have used; novelty is not required. Originality requires only that the author make the selection or arrangement independently (*i.e.*, without copying that selection or arrangement from another work), and that it display some minimal level of creativity. Presumably, the vast majority of compilations will pass this test, but not all will. There remains a narrow category of works in which the creative spark is utterly lacking or so trivial as to be virtually nonexistent.

Id. at 358-359, 111 S.Ct. at 1294-95.

Thus the issue is whether Plaintiffs "selected, coordinated, or arranged," (*id.* at 362, 111 S.Ct. at 1296), the facts in an original way. *Feist* stresses "originality is not a stringent standard; it does not require that facts be presented in an innovative or surprising way." (*Id.*) That case concerned whether the white pages of a telephone book were copyrightable. Because the names and numbers were uncopyrightable facts, any copyright could only be based on the "selection, coordination, and arrangement," (*id.*), of those facts. The Court held the preparation of the white pages of a telephone book involved simply taking the data provided by subscribers and listing it alphabetically by surname. "The end product is a garden-variety white pages directory, devoid of even the slightest trace of creativity." (*Id.*) The same cannot be said here.

The authors of the Article selected facts to be presented and coordinated and arranged them in bar chart fashion in the figures and in columned and lined tables in Table I so as to present a considerable amount of information in a small space. There is no doubt that the degree of originality in this "selection, coordination, and arrangement" of facts is in a higher order of magnitude than that involved in listing data in a practically inevitable alphabetical way.

The cases cited by Cyanamid do not persuade me that the authors' compilation in this case did not meet the "minimal level of creativity," (*id.* at 358, 111 S.Ct. at 1294), required by the Court in *Feist*. *See, e.g., Sinai v. Bureau of Automotive Repair,* 25 U.S.P.Q.2d 1809, 1811, 1992 WL 470699 (N.D.Cal.1992) (arrangement of emission control system information in form of columnar grid "neither original nor protectible"); *Victor Lalli Enters. v. Big Red Apple, Inc.,* 936 F.2d 671, 673 (2nd Cir.1991) (charts used in illegal gambling operations in New York City reporting winning numbers on purely functional grids that offered no opportunity for variation, did not meet minimum standards of originality for copyright protection); *Matthew Bender & Co., Inc. v. Kluwer Law Book Publishers, Inc.,* 672 F.Supp. 107, 109-111 (S.D.N.Y.1987) (arrangement of information relating to personal injury and wrongful death awards and settlements in chart lacked a modicum of selectivity precluding the assertion of copyright).

Other cases have reached the contrary conclusion. *See CCC Info. Servs., Inc. v. Maclean Hunter Market Reports, Inc.,* 44 F.3d 61, 67-68 (2nd Cir.1994) (selection and arrangement of data in car valuation guide "displayed amply sufficient originality to pass the low threshold

requirement to earn copyright protection"); *Kregos v. Associated Press*, 937 F.2d 700, 710 (2nd Cir.1991) (table showing statistics of baseball pitchers copyrightable because requisite creativity shown in selection of statistics).

I conclude the figures and table in the Article constitute copyrightable subject matter, entitled to protection.

e. Damages.

Cyanamid argues any profits earned by Cyanamid are too attenuated to the alleged infringement to permit an award of such profits to Plaintiffs. Only ownership of the copyright and copying by the defendant are necessary to succeed in an infringement action. *Nimmer & Nimmer, supra*, § 13.01. Therefore, Plaintiffs are entitled to judgment on their copyright claim regardless of whether they can later show damages.

The Copyright Act provides that a plaintiff may recover "actual damages and any additional profits of the infringer." 17 U.S.C. § 504(a)(1). Notably, under the Act, "the copyright owner is required to present proof only of the infringer's gross revenue, and the infringer is required to prove his or her deductible expenses and the elements of profit attributable to factors other than the copyrighted work." *Id.* § 504(b). Moreover, "[a]s long as proximate causation is demonstrated, it would seem that profits 'attributable to the infringement' could include even those attributable only indirectly." Nimmer & Nimmer, *supra*, § 14.03[A]; *see Cream Records, Inc. v. Jos. Schlitz Brewing Co.*, 754 F.2d 826, 828 (9th Cir.1985) (plaintiff

awarded some of the defendant's malt liquor sales profits adjudged indirectly attributable to the use of plaintiff's copyrighted music in a commercial.)

Plaintiffs have satisfied the requisite elements of their copyright cause of action against Cyanamid. I therefore grant summary judgment to Plaintiffs on their fourth cause of action.

5. Misappropriation.

In their fifth claim for relief, Plaintiffs' claim "Cyanamid's actions are likely to cause confusion as to the source of the invention embodied in the reformulated Materna and to damage the reputation of Drs. Allen and Seligman," (Second Am.Compl. ¶ 71,) and "constitute misappropriation of Plaintiffs' business value and unfair competition," (*Id.* ¶ 72). Plaintiffs accept Cyanamid's characterization of this claim as incorporating two distinct causes of action: defamation and misappropriation of business value (or unfair competition).

a. Defamation.

Plaintiffs elaborate on this claim as follows:

> Cyanamid's actions constitute disparagement and defamation of Drs. Allen and Seligman, in that Cyanamid's filing of the patent naming Dr. Ellenbogen as sole inventor causes the scientific community to believe that Drs. Allen and Seligman merely copied Dr. Ellenbogen's work to prepare the Article and that Drs. Allen and Seligman wrongfully omitted Dr. Ellenbogen as an author on the Article.

(Second Am.Compl. ¶ 73.)

Colorado law recognizes two types of libel: libel per se and libel per quod. *Lind v. O'Reilly*, 636 P.2d 1319, 1320-21 (Colo.Ct.App.1981). "A published statement . . . is libelous *per se* if it is defamatory on its face, such that no extrinsic evidence is necessary to show either its defamatory nature or that it is of and concerning the plaintiff." *Id.* at 1320 (citations omitted).

Here, the statement not being libel per se, must if libelous be libel per quod and is "actionable only if special damages are pleaded and can be proved." *Id.* Such damages "do not include injuries to a plaintiff's reputation or feelings which do not result in specific monetary loss." (*Id.* at 1321.) Plaintiffs have not pleaded and cannot prove special damages.

Plaintiffs reliance on *Big O Tire Dealers, Inc. v. Goodyear Tire & Rubber Co.*, 408 F.Supp. 1219 (D.Colo.1976), *aff'd*, 561 F.2d 1365 (10th Cir.1977) is to no avail. There, plaintiff prevailed after a jury trial on claims of trademark infringement and trademark disparagement stemming from Goodyear's use of plaintiff's trademark "BIG FOOT." The trial court denied Goodyear's motions for judgment notwithstanding the verdict or for a new trial, upheld the jury's verdicts, and permitted the award of damages notwithstanding plaintiff's failure to prove special damages. The case at bar does not concern a claim of trademark disparagement; nor does *Big O Tire* alter the requirement under Colorado law of special damages concerning libel per quod.

Accordingly, insofar as this cause of action is for defamation, it must fail.

b. Unfair Competition.

Plaintiffs allege "Cyanamid's actions are likely to cause confusion as to the source of the invention embodied in *Materna*," (Second Am.Compl. ¶ 71), and that such actions amount to misappropriation of business value and unfair competition, (*id.* ¶ 72). Cyanamid argues Plaintiffs have not adduced any evidence to support their claim.

"The law of unfair competition has its roots in the common-law tort of deceit: its general concern is with protecting consumers from confusion as to source." *Bonito Boats, Inc. v. Thunder Crafts Boats, Inc.*, 489 U.S. 141, 157, 109 S.Ct. 971, 981, 103 L.Ed.2d 118 (1989). Generally, "the common-law tort of unfair competition has been limited to protection against copying of nonfunctional aspects of consumer products which have acquired secondary meaning such that they operate as a designation of source." *Id.* at 158, 109 S.Ct. at 981. Thus, the tort is commonly asserted to protect trade marks and trade names. *See Adolph Coors Co. v. A. Genderson & Sons, Inc.* 486 F.Supp. 131, 136 (D.Colo.1980).

Both Plaintiffs and Cyanamid cite *American Television & Communications Corp. v. Manning*, 651 P.2d 440 (Colo.Ct.App.1982) as the leading Colorado case concerning unfair competition. There, the plaintiffs held the exclusive rights to display programs for Home Box Office ("HBO"). Plaintiff leased to each of its subscribers a special antenna and converter to enable viewing of HBO programs. Defendants installed antennas and converters capable of receiving the HBO signal. The court reversed a denial of a preliminary injunction, finding establishment

of the undisputed fact that defendants were wrongfully interfering with plaintiffs' exclusive rights to provide HBO.

Cyanamid contends under Colorado law, the claim for misappropriation of business value envisions a wrongful appropriation by one competitor of the skill or labor of another. I agree. Plaintiffs misread *American Television* in maintaining that the plaintiff and defendant in that case were not competitors. Plaintiffs took no steps to exploit their alleged invention commercially, they were not competitors and, therefore had no business for Cyanamid to misappropriate. Thus, the undisputed facts show no basis for an unfair competition claim.

For these reasons Cyanamid is entitled to judgment on Plaintiffs' misappropriation claim.

6. Breach of Confidentiality Obligation.

Plaintiffs allege: "Cyanamid's actions in distributing the manuscripts furnished on a confidential basis by Dr. Allen to Dr. Ellenbogen constitute breach of the obligation of confidentiality reposed by Dr. Allen and accepted by Dr. Ellenbogen." (Second Am.Compl. ¶ 78.)

Cyanamid contends the gravamen of this claim is that Dr. Ellenbogen breached the confidential relationship between himself and Dr. Allen. It correctly notes in Colorado "we do not recognize a separate tort founded upon breach of a confidential relationship." *Bock v. Brody*, 870 P.2d 530, 533 (Colo.App.1993); *see also Todd Holding Co. v. Super Valu Stores, Inc.*, 874 P.2d 402, 403 (Colo.App.1993).

Plaintiffs acknowledge Colorado law does not provide a separate cause of action for breach of a "confidential relationship." They argue, however, "Colorado law does provide that a confidential relationship may give rise to obligations to maintain information in confidence," (Pls. Br. Opp. Def.'s Mot. Summ.J. at 57), and that the latter obligation is "quite clearly actionable," (*id.*) Neither of the cases cited by Plaintiffs, however, involved a separate claim for breach of confidentiality obligation. *Kodekey Electronics, Inc. v. Mechanex Corp.*, 486 F.2d 449 (10th Cir.1973) concerned trade secrets disclosed in breach of a secrecy agreement signed by defendant. The court held such disclosure constituted unfair competition. It did not recognize a separate tort for breach of confidentiality obligation.

In *Saine v. A.I.A., Inc.*, 582 F.Supp. 1299, 1309 (D.Colo.1984), I denied a motion for more definite statement on a counterclaim based on unfair competition. Defendant alleged plaintiff and a third-party defendant conspired to obtain confidential information from it. These allegations were advanced not in support of a breach of confidentiality obligation but in support of defendant's counterclaim of unfair competition and unfair trade practices.

Because Colorado law does not recognize a separate tort of breach of confidentiality obligation, Cyanamid is entitled to judgment on Plaintiffs' seventh claim for relief.

7. Unjust Enrichment.

In their eighth claim for relief, Plaintiffs allege: "Cyanamid's actions constitute unjust enrichment." Cyanamid contends the undisputed facts mandate summary judgment in its favor on this cause of action.

In *Cablevision of Breckenridge v. Tannhauser Condominium Association*, the Colorado Supreme Court stated in order to recover under a quasi-contract or unjust enrichment theory,

> a plaintiff must show (1) that a benefit was conferred on the defendant by the plaintiff, (2) that the benefit was appreciated by the defendant, and (3) that the benefit was accepted by the defendant under such circumstances that it would be inequitable for it to be retained without payment of its value. Application of the doctrine does not depend upon the existence of a contract, express or implied in fact, but on the need to avoid unjust enrichment of the defendant notwithstanding the absence of an actual agreement to pay for the benefit conferred. The scope of this remedy is broad, cutting across both contract and tort law, with its application guided by the underlying principle of avoiding the unjust enrichment of one party at the expense of another.

649 P.2d 1093, 1096-97 (Colo.1982) (en banc) (citations omitted).

In their interrogatory responses, Plaintiffs claim to have conferred two benefits on Cyanamid: (i) the "invention of the reformulation and the communication of such invention" by a March 4, 1980 letter from Dr. Allen to Dr.

Ellenbogen, (Def.'s Memo Law Supp. Mot. Summ.J., Thomasch Aff., Ex. 1 at Response No. 1) and (ii) a "Patent monopoly," (*id.* at Response No. 2). Cyanamid maintains neither alleged benefit is sufficient to support Plaintiff's unjust enrichment claim.

Cyanamid claims, to the extent the claim is based on "the invention of the reformulation and the communication of such invention," Plaintiffs have not established that they had any expectation of compensation from the disclosure of information regarding the reformulation. *See Britvar v. Schainuck*, 791 P.2d 1183, 1184-85 (Colo.Ct.App.1989). Cyanamid cites Dr. Allen's testimony that he "did not think that [he] was owed any additional monies for the studies we had performed." (Thomasch Aff., Ex. 6 at 968.) Plaintiffs do not respond to this argument. However, Dr. Allen's comments construed in the light most favorable to Plaintiffs, do not preclude the possibility that, although he expected no further payment for the studies themselves, had he known of Cyanamid's patent application arising from the disclosure, he would have expected additional compensation.

" 'A person confers a benefit upon another if he . . . in any way adds to the other's security or advantage.' " *Cablevision of Breckenridge*, 649 P.2d at 1097 (citing the *Restatement of Restitution* § 1, comment b (1937)). Cyanamid has not established as an undisputed issue of fact that Plaintiffs did not confer a benefit on it by disclosing information concerning the reformulation and that Cyanamid did not inequitably benefit from such disclosure. Therefore, summary judgment on the unjust enrichment claim is denied.

8. Statute of Limitations.

Cyanamid seeks summary judgment on the grounds that each of Plaintiffs' claims is barred by the applicable statute of limitations, none of which provides for a limitation period in excess of four years.

Colorado has adopted a date-of-discovery rule for the purpose of determining when a cause of action accrues. Under this rule, a cause of action typically accrues when the tortious act is discovered or should have been discovered by the exercise of reasonable diligence. *See* Colo.Rev.Stat. § 13-80-108 (1987).

"[T]he focus is on a plaintiff's knowledge of facts which would put a reasonable person on notice of the general nature of damage and that the damage was caused by the wrongful conduct. . . . " *Morris v. Geer,* 720 P.2d 994, 997 (Colo.Ct.App.1986). "The time when a plaintiff discovered, or through the use of reasonable diligence should have discovered, the [wrongful] conduct is normally a question of fact which must be resolved by the trier of fact." *Id.* "[O]nly in the clearest of cases may a summary judgment motion be granted where discovery of the injury is the pivotal issue." *Mastro v. Brodie,* 682 P.2d 1162, 1169 (Colo.1984) (en banc).

Cyanamid does not contend it is undisputed that Plaintiffs had actual knowledge of their claims at a time that would bar such claims. However, it contends Plaintiffs should have known of the Patent long before August 1989 (four years before this action commenced). In support, Cyanamid relies on the promotions and advertising

of the Materna product after the patent issued in February 1984; the Patent label marked on the commercial bottle of Materna;[3] the issuance of the Patent and its recordation in the Patent Office;[4] the Materna entry referencing the patent in the *Physicians Desk Reference* book, copies of which were maintained by the University of Colorado; Drs. Allen and Seligman's continued performance of studies for Cyanamid on Materna both before and after the patent issued; and Dr. Seligman's prescription of Materna after the issue of the patent.

Plaintiffs respond the patent notice was tiny and buried in the Materna label; the Materna labels furnished to Drs. Allen and Seligman were over-stickered with a special "FOR INVESTIGATIONAL USE ONLY" label that did not contain the patent notice; the patent notice merely states "Patented" and gives the United States patent number and could have pertained to any of the ingredients, the manufacturing process or even the packaging; the advertisements referred to by Cyanamid ran a total of four times in *Obstetrics and Gynecology*, a journal directed

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[3] Cyanamid cites *American Medical Systems v. Medical Engineering Corp.*, 6 F.3d 1523, 1537 (Fed.Cir.1993) which held that patent marking in compliance with statute is in rem notice entitling the patentee to recover damages from a patent infringer. As Cyanamid acknowledges, however, no case holds that marking is notice to the world for the purpose of the statute of limitations.

[4] The Supreme Court's dicta in *Sontag Chain Stores Co. v. National Nut Co.*, 310 U.S. 281, 295, 60 S.Ct. 961, 967-68, 84 L.Ed. 1204 (1940) and other cases cited by Cyanamid to the effect that the issuance of a patent is notice to the world for certain purposes, do not support the conclusion that such issuance is notice for all purposes, including the statute of limitations.

toward obstetricians and gynecologists rather than hematologists; Dr. Seligman already knew the content of the Materna he prescribed and therefore had no need to consult the *Physicians Desk Reference* or label each time he prescribed it.

Viewing the facts in the light most favorable to plaintiffs, they do not establish that Plaintiffs, by the use of reasonable diligence, should have discovered the Patent. This is not the clearest of cases and therefore summary judgment is not appropriate on the issue of due diligence.

Plaintiffs argue additionally that the statutes of limitations and laches do not run against the University or the Regents as they are part of the State of Colorado. Under the *nullum tempus* doctrine, statutes of limitation and laches normally do not apply against federal and state entities. *City of Colorado Springs v. Timberlane Assocs.*, 824 P.2d 776, 780 (Colo.1992) (en banc).[5]

Cyanamid responds neither the University nor the Regents has a claim against it because Drs. Allen and Seligman did not follow the University's patent policy and there was no assignment of rights. Further, even if the University had any rights in the alleged invention, Cyanamid contends the University assigned such rights to the Foundation. Because I find factual issues preclude summary judgment on the basis of the applicable statutes of limitations, I do not reach this issue.

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[5] "The origin of governmental immunity from statutes of limitations is found in the English common law rule of '*nullum tempus occurrit regi*,' or, 'time does not run against the king.' " *Colorado Springs v. Timberlane Assocs.*, 824 P.2d 776, 777 (Colo.1992) (en banc) (footnote omitted).

IV. Order.

IT IS ORDERED THAT Plaintiffs' Motion for Partial Summary Judgment is DENIED on the first and second causes of action and GRANTED on the fourth cause of action;

IT IS FURTHER ORDERED THAT Defendant's Motion for Partial Summary Judgment is DENIED on the fourth cause of action;

IT IS FURTHER ORDERED THAT Defendants' Motion for Summary Judgment is GRANTED on the first, third, fifth and seventh causes of action and DENIED on the second, fourth, sixth and eighth causes of action.

United States Court of Appeals for the Federal Circuit

97-1468, 98-1113

THE UNIVERSITY OF COLORADO FOUNDATION, INC., THE UNIVERSITY OF COLORADO, THE REGENTS OF THE UNIVERSITY OF COLORADO, ROBERT H. ALLEN, and PAUL A. SELIGMAN,

Plaintiffs-Cross Appellants,

v.

AMERICAN CYANAMID COMPANY,

Defendant-Appellant,

and

LEON ELLENBOGEN,

Defendant.

JUDGMENT

ON APPEAL from the U.S. District Court for the District of Colorado in CASE NO(S) 93-CV-1657

This CAUSE having been heard and considered, it is ORDERED and ADJUDGED:

AFFIRMED-IN-PART, VACATED-IN-PART, and REMANDED

ENTERED BY ORDER OF
THE COURT

/s/ Jan Horbaly/BG
Jan Horbaly, Clerk

Nov. 19, 1999

ISSUED AS A MANDATE: DECEMBER 27, 1999

United States Court of Appeals for the Federal Circuit

UNIVERSITY OF CO V AMER CYANAMID, 97-1468, 98-1113 (DCT – 93-CV-1657)

ORDER

(Filed Dec. 17, 1999)

Before RADER, Circuit Judge, and BRYSON, Circuit Judge,

A petition for rehearing having been filed by the APPELLANT,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED.

The mandate of the court will issue on December 27, 1999.

FOR THE COURT,

/s/ Jan Horbaly [illegible initials]
Jan Horbaly
Clerk

Dated: December 17, 1999

cc: ROGER P. THOMASCH
HAROLD A. HADDON